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June 17, 2005

VIA ELECTRONIC MAIL AND OVERNIGHT DELIVERY

Mr. Scott W. Matthews
Acting Executive Director
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Energy Commission Executive Director Notice Of Intent To Release Aggregated Data, Docket No. 04-IEP-1D

Dear Mr. Matthews:

Southern California Edison Company ("SCE") is responding to your letter of June 3, 2005, transmitting the "Energy Commission Executive Director Notice of Intent To Release Aggregated Data" ("NOI," attached as Appendix 1). As an initial matter, SCE wants to make clear that SCE is willing to provide its confidential data to Commission staff, Public Utilities Commission ("CPUC") staff, the Office of Ratepayer Advocates ("ORA"), The Utility Reform Network ("TURN"), and other non-market participants who sign an appropriate non-disclosure agreement.[1] SCE is unwilling, however, to allow its confidential information to be provided to generators, brokers and other market participating parties, who could use the information to harm SCE's customers.

SCE Appeals From 3 Of 10 Proposals in the NOI

As SCE understands the NOI, the Commission intends to release 10 distinct sets of data: Bundled Customer Capacity (annually and quarterly), Bundled Customer Energy (annually and quarterly), Geographically-aggregated Capacity (annually and quarterly), Geographically-aggregated Energy (annually and quarterly), and Geographically-aggregated Capacity with ranges given (annually and quarterly). In general, SCE does not oppose the release of 7 out of the 10 forms proposed by the NOI,

[1] Thus, SCE supports TURN's position, expressed in its June 15, 2005 letter to the Commission, to allow TURN access to this material under a non-disclosure agreement or protective order.

provided the Commission releases the Proposal 1 "annual energy data" for every load-serving entity (and not just investor-owned utilities ("IOUs")):

- Proposal 1, annual bundled customer energy data;
- Proposal 2, annual geographically-aggregated capacity data;
- Proposal 2, annual geographically-aggregated energy data;
- Proposal 2, quarterly geographically-aggregated capacity data;
- Proposal 2, quarterly geographically-aggregated energy data;
- Proposal 3, annual geographically-aggregated capacity data, with a range of values;
- Proposal 3, quarterly geographically-aggregated capacity data, with a range of values;

SCE does, however, object to the release of three sets of data that the Commission intends to produce. Therefore, pursuant to Title 20 of the California Code of Regulations, Section 2505(a)(3)(B), SCE hereby appeals from the following portions of the NOI, on the grounds that they reveal proprietary, confidential, and trade secret information:

- Proposal 1, for annual capacity data;
- Proposal 1, for quarterly capacity data;
- Proposal 1, for quarterly energy data.

SCE also objects to the Commission's attempt to treat IOU confidential data differently than data supplied by Energy Service Providers ("ESPs"). This distinction is impossible to justify. The Commission should protect the data of all load-serving entities ("LSEs"), not just the data of generators and ESPs, and where disclosure is required, the disclosure requirement should be uniform, and not just pertain to IOUs.

In general, SCE cautions the Commission against taking actions in the name of "transparency" that will allow market participants to benefit unjustly at the expense of California's electricity customers. John Q. Public and Granny Doe are not seeking access to SCE's "Bundled Customer Net Peak Demand + 15% Planning Reserve Margin" or "Bundled Customer Future Generic Resource Needs." Market participants, and the trade organizations that represent them, are the ones who are agitating for this data. They do not want this information to enable the state to keep energy prices low, or improve services to California's ratepayers. They fight to obtain this

information only to maximize profits for their shareholders. That is why they take every opportunity to fight disclosure of their own information.

Procedural Summary

The NOI is based on a Draft Proposal issued on May 13, 2005 by Commission staff ("Draft Proposal"). The Draft Proposal proposed that the Commission release capacity and energy data in two ways: (1) for the bundled service customers of each utility, aggregated annually; and (2) across defined geographical areas, also aggregated annually. SCE and other parties participated in a May 18, 2005 meeting arranged by Commission staff in which the IOUs expressed grave concerns with the Draft Proposal as it was then written. The IOUs particularly objected to the release of utility-specific capacity data, some of which is now the subject of a writ petition in Superior Court.

On May 20, 2005, two days after the meeting with Commission staff, the IOUs filed joint comments on the Draft Proposal. (A copy of those comments is attached as Appendix 2.) In those comments, the IOUs supported the general concept of aggregating data, but expressed strong objections to the Draft Proposal. Among other things, the IOUs opposed releasing bundled-service customer capacity data. The IOUs also felt strongly that all load-serving entities should be treated similarly in reporting purposes.

The NOI differs from the Draft Proposal in three important respects. First, the NOI would release data only from 2009 forward. SCE welcomes this change, as nearer-term data is somewhat more sensitive than the data further out. However, the data for 2009 and later is still highly market-sensitive because this is the period SCE and the other IOUs would need to procure new capacity to meet those future needs. The NOI also adds to the Draft Proposal a "Proposal 3," which would provide a range of data in the geographically-aggregated regions. In one sense, however, the NOI releases more confidential data than the Draft Proposal, in that it releases data on a quarterly, not just an annual, basis. No reason is given for the release of quarterly data. Even more important, the Commission gives no justification for it.

Our specific concerns with the NOI are set forth below.

Proposal 1, Annual Capacity Data For Bundled Service Customers

Bundled service customer capacity data is the most market-sensitive data that the NOI is proposing to publicly disclose. And the residual net short – directly revealed by the tables proposed by staff – is one of the biggest trade secrets. Proposal 1 of the NOI (for capacity) would reveal not only SCE's peak demand calculations for bundled service customers, but the existing and planned resources SCE uses to meet those customers' needs and SCE's "future generic resource needs" – i.e., its bundled customer residual net short.

SCE's peak demand calculations are presently the subject of a writ action in Superior Court. (Southern California Edison Company v. State Energy Resources Conservation and Development Commission, Case No. 05CS00860). In advance of that action, the Commission agreed to "attempt to maintain confidentiality of the Disputed Data until a final judgment is issued in the Potential [now, actual] Litigation or the statute of limitations for such litigation has run." The Commission agreed not to release the information unless there is a Public Records Act ("PRA") request for it. In return, SCE agreed not to seek a temporary restraining order in that action until the Commission received a PRA request and was going to provide the information pursuant to it. In a telephone conversation on June 8, 2005, Commission staff claimed that the information the Commission now proposes to release is "different". Although the numbers of the peak demand forecast are somewhat different since the S-1 form used different assumptions for four different scenarios, this data is, in truth, exactly the same information that is the subject of the Court action. The same peak demand numbers can be calculated by adjusting some lines in S-1. Therefore, the Commission would breach its agreement if it released this data.

Nonetheless, even if there were no court action pending, the Commission should reverse its decision to release this information. Under California law, "it is not necessary in order that a process of manufacture be a trade secret that it be patentable or be something that could not be discovered by other by their own labor and ingenuity."[2] The central issue is whether the system gains value from being kept confidential, not whether others could derive a similar system through independent effort.[3] Indeed, California courts have held that marketing strategy, plans, and techniques can be deemed trade secrets.[4] Cases have recognized that information related to cost and pricing can be trade secret as well.[5]

The Bundled Customer Peak is not provided to the public. If power producers knew this peak annual number, and also were able to determine from other sources how much power SCE already secured, those generators could determine SCE's net short, i.e., how much power SCE needed to buy. This information would give prospective suppliers a significant advantage in negotiations for supplies of power. In essence, the Bundled Customer Peak is half of the "net short trade secret." It is also, in itself, a market-sensitive secret which SCE has protected and since restructuring has never revealed publicly.

Yet, the NOI goes even further in that it releases the actual annual (and quarterly) net short itself. This is a key trade secret that SCE has always protected. It is not necessary for the Commission to reveal the *hourly* peak demand or hourly net

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2 *By-Buk Co. v. Printed Cellophane Tape Co.*, 163 Cal. App. 2d 157, 166, 329 P.2d 147 (1958).

3 *See id.; see also Abba Rubber Co. v. Seaquist*, 235 Cal. App. 3d 1, 18, 286 Cal. Rptr. 518 (1991).

4 *Whyte v. Schlage Lock Co.*, 101 Cal. App. 4th 1443, 1456 (2002)

5 *See Courtesy Temporary Service, Inc. v. Camacho*, 222 Cal. App. 3d 1278, 1288 (1990) (billing and markup rates "irrefutably" of commercial value).

short to cause damage to SCE. SCE procures to meet its annual net short, not any specific hour, but for the peak hour whenever it occurs. Moreover, SCE generally procures quarterly products. Because SCE's system peaks each year on a day in the summer (as opposed to, say, Pacific Northwest utilities, which peak in the winter), a supplier who knows SCE's forecast load for its bundled service customers at the time of the peak would be substantially advantaged by knowing just how much capacity SCE requires every day for the third quarter of the year.

SCE is including with this appeal a declaration from Charles R. Plott, Ph.D., dated June 17, 2005, (attached as Appendix 3) and a declaration of Kevin R. Cini, dated June 9, 2005, which was filed in the writ petition action referenced above (attached as Appendix 4). These declarations further explain why this data is market sensitive and the harm that could ensue if the Commission were to publish it.

In addition to the fact that SCE's capacity net short is a trade secret, the Commission must follow statutes and CPUC rules to guard confidential information. The CEC IEPR Process has become inextricably linked to the CPUC's procurement planning process. For example, in a ruling dated March 14, 2005, CPUC Commissioner Michael Peevey stated: "With narrow exceptions consistent with Public Resources Code Section 25302(f), the CPUC will not provide an additional opportunity for parties to re-examine IEPR determinations during its 2006 procurement proceedings. Parties will not be permitted to present evidence, testimony, or argument that they presented, or could have presented, in the CEC's IEPR proceeding."[6] The Legislature, in Assembly Bill 57, specifically charged the CPUC with ensuring the confidentiality of market sensitive procurement plan-related information. As the CEC has joined the procurement planning process, it must follow California law which requires the protection of "market-sensitive information" in accordance with procedures designed by the CPUC under Public Utilities Code Section 454.5(g), such as the April 4, 2003 Administrative Law Judges' Ruling Regarding Confidentiality Of Information And Effective Public Participation.[7]

The Commission claims that a CPUC ruling issued in R.04-04-003 and R.04-04-025 makes public "a wide range of similar data." This is simply not so. The ruling in question does not make public any capacity net short data, of any aggregation. And the demand data released is that of "system demand," which is a number completely different from the bundled customer demand that the NOI would release.[8] The system demand includes the demand of both bundled service and direct access customers. It includes customers for whom SCE must procure power, as well as

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[6] Assigned Commissioner's Ruling Detailing How The California Energy Commission 2005 Integrated Energy Policy Report Process Will Be Used In The California Public Utilities Commission's 2006 Procurement Proceedings And Addressing Related Procedural Details, issued March 14, 2005 in Rulemaking 04-04-003.

[7] This Ruling was filed in R. 01-10-024.

[8] *See* Administrative Law Judges' Ruling On Protective Order and Remaining Discovery Disputes, Issued May 9, 2005, at p. 26.

customers who rely on ESPs to procure their power. As such, it is more similar to the geographically-aggregated data that the Commission would provide in Proposals 2 and 3, than the bundled customer demand data that is the subject of Proposal 1.

Proposal 1, Quarterly Capacity Data For Bundled Service Customers

All of the reasons set forth above apply to the Quarterly Capacity Data that the Commission would provide under Proposal 1. If anything, the quarterly data is more sensitive, because it provides a finer gradation of SCE's customers' demand, and SCE's needs to meet that demand. Because SCE often procures quarterly products, the quarterly capacity net short, and the components of it, are extremely sensitive. A marketer who has access to SCE's annual capacity net short would know the resources SCE needs to fill to cover its summer peak. A marketer who has access to SCE's capacity net short for each quarter, however, would know how much power SCE must procure to meet the peak for that particular quarter. Because SCE generally procures products by quarter, the marketer would know exactly what SCE needs and is seeking. The marketer would thereby be able to strategically modify its behavior, including prices bid to SCE, to increase profits (and SCE's costs) above what they would otherwise be were the confidentiality of SCE's information maintained.

This is also true when SCE is "net long" in any quarter. Data enabling market participants to determine SCE's residual net long position would allow them to know, and exploit to their advantage, how much capacity SCE has to sell in that quarter. SCE does not have equivalent information about other companies' "short" or "long" positions. Other companies could exploit the public release of SCE's confidential information by pursuing various strategies, including selling in front of SCE, taking the best offers for themselves and depressing prices SCE would receive. This data must not be provided publicly to market participants.

Proposal 1, Quarterly Energy Data For Bundled Service Customers

Although SCE does not oppose the release of Bundled Customer Energy data on an annual basis – in fact, SCE never claimed that it was confidential – SCE does oppose the publication of its quarterly Bundled Customer Energy data, quarterly energy supply, and quarterly energy net-short and net-long positions. As noted above, SCE often procures (and sells) quarterly products. Providing quarterly energy supply information reveals information about when SCE's contracts start and end, the timing of plant outages, and the amount of energy that can be produced from energy-limited resources (such as from hydroelectric generation). Providing quarterly net-short or net-long energy positions, or information that could be used to calculate or estimate quarterly net-short or net-long positions, provides information on the timing and quantities that SCE will be seeking to buy or sell in the market, as the case may be.

The power producers could use this information to manipulate the prices in various ways. For example, in a concrete solicitation to buy energy, a power producer

could bid higher prices when SCE's net short position is significant for any given quarter and it expects that SCE would need to contract with multiple generators. Additionally, a power producer who knows how much energy SCE is seeking to buy by quarter could schedule a major plant outage when SCE's energy needs are higher, which could result in higher prices and profits for energy sales from its other plants. The above effect is magnified to the extent multiple power producers see the same confidential information and employ the same strategy to increase profits. A power producer who knows that SCE is long in a particular quarter, and will thus be selling energy, might want to enter sales contracts ahead of SCE, to ensure that it takes advantage of the best offers before SCE.

All Non-Municipal Load-Serving Entities Should Be Treated The Same

Finally, the Commission should treat all load serving entities equally with regard to all public policy considerations. There is no sound public policy to do otherwise. In the present environment where a competitive wholesale market exists, and changes are being considered to significantly expand the current extent of competition in retail markets, it is critical to not advantage any one set of load serving entities over another. This important public policy was recognized when resource adequacy requirements were established and it should apply to all other obligations being placed on load serving entities. (Indeed, if the purpose of disclosing data is to track the attainment of resource adequacy requirements, the same data must be made available for each LSE or should not be produced for any LSE.) With regard to the specific proposal for aggregating data, the same standard for disclosing market sensitive information should apply to all LSEs and disclosure (or non-disclosure) should be made accordingly.

The NOI claims that ESPs should be in a different position because "they compete against each other" but due to the current suspension of direct access "may not compete to acquire additional customers from IOUs." This is not actually the case. Direct Access in California represents about 23 billion kWh annually (approximately 10 percent). In SCE's area, 16 retail Electric Service Providers (ESPs) are active and 117 are eligible to provide Direct Access service. Customers who are the beneficiaries of the "switching exemption" can return to bundled service and, after three years, return to Direct Access. Moreover, because California is actively considering core/non-core models, community choice aggregation, and other forms of retail restructuring, there is the potential for much greater involvement of retail market participants in the near future.

Market participants serving the retail side can use SCE's confidential information – particularly its buying, selling, and hedging requirements, contract information and residual net short and net long positions – to obtain more favorable deals for their customers at the expense of SCE's bundled service customers. Furthermore, retail market participants who have access to SCE's confidential

information can purchase energy or capacity knowing when and how much they can resell to SCE at inflated prices, based on SCE's needs. In other words, market participants serving the retail side are buyers and sellers on the wholesale side. While SCE opposes three components of Proposal 1, if the Commission forces IOUs to release this information, it must treat all LSEs equally.

The Commission Should Collaborate With The CPUC On Protecting Confidential Information

The CPUC has viewed the Commission as an important part of the procurement planning process. Likewise, the NOI relies on the ruling of a CPUC Administrative Law Judge to (mistakenly) justify the publication of certain data. Despite the relationship between the CEC's and CPUC's procurement proceedings, the CEC has not adopted the CPUC's rules to ensure that market-sensitive information is not published. When it comes to protecting confidential information, there is inconsistency not just between, but within, each of the agencies.

The CPUC is planning to open a new rulemaking to address the treatment of confidential information.[9] SCE respectfully suggests that the Commission work jointly with the CPUC to ensure that the proceeding develop consistent rules that will apply to both agencies. Until these rules are developed, however, the Commission should refrain from publishing data that the IOUs claim as confidential under relevant statutes and existing CPUC rules.

Summary

For all of the aforementioned reasons, the Commission should adopt Proposals 2 and 3 on an annual basis, and also allow the release of Annual Bundled Customer Energy Data, as set forth in Proposal 1. The Commission should reverse the determination of the Executive Director and prohibit the release of:

- IOU Bundled Customer Capacity Data, on an annual basis, as set forth in Proposal 1.
- IOU Bundled Customer Capacity Data, on a quarterly basis, as set forth in Proposal 1.
- IOU Bundled Customer Energy Data, on a quarterly basis, as set forth in Proposal 1.

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[9] This has been noted on the CPUC's recent agenda as "R_____ - Order Instituting Rulemaking to implement Senate Bill No. 1488 (2004 Cal. Stats., Ch. 690 (Sept. 22, 2004)) relating to confidentiality of information." On June 16, 2005, the CPUC held consideration of this new rulemaking to its June 30, 2005 meeting.

The Commission should also treat all LSEs equally and, if it chooses to release information, should release the same information for all of them.

Very truly yours,

Beth A. Fox

cc: Caryn Holmes, Esq., California Energy Commission (via Overnight Delivery)
Kevin Kennedy, California Energy Commission (via Overnight Delivery)

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Enclosure(s)

Appendix 1

CALIFORNIA ENERGY COMMISSION
516 NINTH STREET
ACRAMENTO, CA 95814-5512
ww.energy.ca.gov

June 3, 2005

Ms. Laura Genao
Southern California Edison Company
2244 Walnut Grove Avenue
Rosemead, CA 91770

Dear Ms. Genao:

RE: Plans to release aggregated confidential data

Energy Commission staff has reviewed the various data filings provided by the state's load serving entities (LSEs) over the last several months. Because much of this data is being treated as confidential, staff plans to present aggregated data in our staff reports on the electricity supply and demand situation in California. Kevin Kennedy, the Energy Report program manager, discussed a draft of this proposal with the affected LSEs in meetings two weeks ago, and all of you filed comments on the draft after the meetings. I appreciate your willingness to provide comments and recommendations quickly. As you know, a key Energy Commission goal is to conduct the 2005 *Energy Report* proceeding in as open and transparent a manner as possible. At the same time, we are bound to protect any information that has been provided that is entitled to confidential treatment. After considering the responses from the LSEs, I believe that the attached plan for release of aggregated data succeeds in balancing those two principles.

Release of aggregated information is important to providing the necessary foundational material to support the Energy Commission's recommendations relating to the state's electricity system. The aggregation plan includes geographic aggregation that will be useful in the Commission's development of statewide energy policy recommendations. In addition, because the Energy Commission and the California Public Utilities Commission (CPUC) have agreed that the 2005 *Energy Report* proceeding will be the start of a new integrated statewide planning process, we need to address LSE-specific information. As stated in President Peevey's September 16, 2004, Assigned Commissioner Ruling (ACR), the 2005 Energy Report process "will estimate need for resource additions, evaluate policies and recommend appropriate resource strategies for the state to meet forecasted load on a biennial cycle. All load serving entities will provide load forecasts, resource plans and transmission assessment as input." The CPUC expects the Energy Commission to provide a transmittal report that is "based on the comments and information provided by all the participants regarding the issues, and will identify the likely range of statewide and LSE-specific need [and] a discussion of issues relevant to this determination." (March 14, 2005, ACR) To fulfill these

requirements, the Energy Commission must provide participants in the 2005 Energy Report proceeding with sufficient information to allow an understanding of its recommendations on LSE-specific range of need.

I believe the current proposal protects confidential information while providing the public with an adequate opportunity to review and discuss the information that we will transmit to the CPUC along with the Energy Commission's findings and recommendations. Nonetheless, I recognize that some LSEs may have concerns about the degree of disclosure that would result from this plan. If you believe that any of the proposals in the plan will result in the release of information that is entitled to confidential treatment, you should file an appeal with the Commission in the Energy Report docket (04-IEP-1D) within fourteen days of this letter. (Cal. Code Regs., tit. 20, 2507(e)(2).) Please provide copies to Kevin Kennedy, Energy Report Program Manager, and Caryn Holmes, Energy Report Committee Counsel. While it is not required, if you decide before the deadline for filing an appeal that you are satisfied with a portion of our proposals and will not file an appeal for these, it would be helpful to staff in preparing key reports for a mid-June publication date if you notified us of that decision as soon as it is made.

Thank you for the work you and your staff have done in providing information for this proceeding. I look forward to your continued cooperation in the future. If you have questions or concerns about this proposal, please contact Kevin Kennedy at (916) 651-8836.

Sincerely,

SCOTT W. MATTHEWS
Acting Executive Director

cc: Docket Unit, 04-IEP-1D

ENERGY COMMISSION EXECUTIVE DIRECTOR NOTICE OF INTENT TO RELEASE AGGREGATED DATA

Background

The information provided by the state's load serving entities (LSEs) is a key part of the record for the *2005 Energy Report* proceeding. Evaluation of this information by Energy Commission staff and other parties will help inform the findings and recommendations in the *2005 Energy Report*, which in turn will form the basis for the transmittal of data and recommendations to the California Public Utilities Commission for the 2006 long-term procurement proceeding.

Much of the data supplied by investor-owned utilities (IOUs) and electricity service provider (ESPs) is being treated as confidential, either because the Executive Director determined that filers had made a reasonable claim that the information is entitled to protection, or because the process for resolving LSE appeals of Executive Director determinations that the data is not entitled to confidential protections is not yet complete.

The Energy Commission is committed to ensuring that the *2005 Energy Report* policy proceeding is conducted in an open and public manner. The *Energy Report* Committee expects that all the information that it considers in developing findings and recommendations in the *2005 Energy Report* and accompanying transmittal report for the CPUC will be part of the public record. While monthly demand and monthly specific resource data at the IOU bundled service load level has been granted confidentiality, the CPUC expects the Energy Commission to transmit information on the IOU positions through the *2005 Energy Report* process, and expects that all parties will have the opportunity to review and comment on this information. In order to meet this objective, the Energy Commission staff is developing summaries and aggregations of the confidential data for outside parties and Energy Commissioners to review. These summaries and aggregations will allow all parties to understand the supply/demand picture for the state and for the individual utilities. They protect the confidentiality of any underlying data that is confidential.

The IOUs have suggested that the Energy Commission's collaboration with the CPUC in the procurement process binds the Energy Commission to follow the CPUC's confidentiality determinations. While similar data has been provided to the CPUC for past proceedings, the data filed by the LSEs for the *2005 Energy Report* proceeding has not itself been reviewed for confidentiality by any other agencies. It therefore falls on the Energy Commission to determine whether this data should be shielded from release under the Public Records Act based on applicable laws and regulations. Even if it were appropriate for the Energy Commission to apply the

CPUC's requirements to this data, the CPUC has been directed by legislation to revisit its own approach to confidentiality, and expects to do so before the 2006 procurement proceeding begins.

Overview of Staff Proposals

The staff plans to release to the public aggregated data tables described in the three proposals below, which have been designed to mask the underlying resource plan data that has been designated as confidential. Each of the three proposals address both projected energy production and productive capacity of resources. Further, each of these tables will have annual and quarterly versions.

In all three sets of tables, the data will be aggregated in two dimensions: (1) along the time dimension, and (2) along the specificity of resource dimension by combining data about individual resources into categories of resources. The temporal aggregation will be from the monthly data submitted to quarterly and annual values. For the capacity tables, this aggregation will be developed by selecting values for the single month in which the forecast total peak demand is highest during the period, without identifying what month was selected. For example, in preparing an annual capacity from S-1 data if peak demand is highest in August for a specific year, all values for that year will be from August. For the energy tables, the data will be summed over the months in the relevant period. The quarterly data would be based on calendar quarters, and the annual data would be based on calendar years.

In addition, individual rows of resource-specific data from the submittals would be combined into various category subtotals. In these aggregated tables, staff will include all the rows relating to demand that do not reveal supplier categories, but will combine the specific resource listings (e.g. individual power plants, or individual contracts) into categories of resources (e.g. utility-controlled fossil resources, or existing & planned renewable contracts). Tables 1 and 2 at the end of this document summarize the categories staff will use for release of capacity and energy data, respectively. Staff has also prepared a template Excel spreadsheet similar to the public versions of forms S-1 and S-2 that the IOUs provided with their resource plan filings to use as a visual image of the annual version of the proposed tables. The quarterly version would simply have more columns.

The three sets of aggregated data tables differ based on the degree of geographic aggregation, and whether the scenarios filed by the LSEs are reported separately or are only shown as a range across scenarios. These differences are summarized as follows:

1. **IOU-specific tables for each scenario**: For each resource plan scenario, the staff will aggregate individual IOU bundled service customer data by aggregating monthly resource-specific entries to produce annual and quarterly subtotals by resource categories;

2. **Planning area tables for each scenario**: For each resource plan scenario, the staff will aggregate monthly resource-specific data for all LSEs serving load within a transmission planning area to produce annual and quarterly subtotals by resource categories; and

3. **Planning area tables showing capacity scenario ranges**: The staff will combine the results of the individual capacity scenarios for each planning area in the previous proposal to create a single table that shows the range of values.

These three proposals are discussed in more detail below. The staff believes that the first two proposals together provide the most appropriate level of disclosure consistent with protection of confidential data. The tables in the third proposal will only be produced if one or more LSE objects to either of the first two proposals.

The LSEs whose data is being aggregated can appeal the decision to release some or all of these tables to the full Energy Commission. No release of aggregated information that is the subject of an appeal to the full Commission will be allowed until the appeal is settled. In agreeing to or appealing the release of these three sets of aggregated data tables, the LSEs should consider the annual and quarterly versions separately, e.g. there are six proposed ways in which the data will be aggregated.

Proposal 1: IOU Bundled Customer Data

Under this proposal, staff will produce data tables consistent with Tables 1 and 2 for each of the IOUs, as described above. The tables will show annual and quarterly aggregated energy and capacity information for each IOU's bundled loads, for each of the four resource plan scenarios provided by the IOUs. These tables would be similar to the public versions of forms S-1 and S-2 that each IOU voluntarily provided, though they would provide more detailed information on categories of resources, particularly on the capacity side. The staff accepts the IOU suggestion that near term values have special sensitivity, so the tables would begin with year 2009.

The information included on these tables does not reveal the confidential data from the IOU filings, and is not itself entitled to confidential treatment. Aggregating supply data across the two dimensions (from monthly to annual and quarterly data and from individual resources to resource categories) does not reveal confidential monthly resource-specific data. Nor can these data aggregations be combined with other publicly available data to identify confidential monthly, individual resource-specific data for an individual IOU. This is due to the fact that in most of the resource categories, many individual resource entries are aggregated together into a single value. The only instances in which the number of individual resources comprising a category is small are when the resources are utility-owned. Substantial information is publicly available about these resources. IOU concerns about revealing how such

resources might be used to meet demand over time are addressed by providing only annual and quarterly values, and by keeping monthly patterns confidential.

The quarterly and annual demand aggregations for the top rows of the S-1 and S-2 forms are not themselves confidential for two reasons. First, the various adjustments from gross load to net load resulting from shifts in supplier from IOU to other LSEs have been aggregated into a single "load adjustment" row that does not reveal alternative supplier. Even for the individual sources of adjustment, in most instances the resource plan forms and instructions directed the nature of the adjustment. The magnitudes of these values as submitted in the S-1 and S-2 forms reveal more about implementation of Commission direction rather than predictions of loss of load from modeling and analyses reflecting the business assessments of the IOU. Second, the demand-side load adjustments resulting from energy efficiency, demand response, and distributed generation are largely a matter of public knowledge having been issued as programmatic goals by CPUC orders. At this level of aggregation, staff does not believe any confidential information is being released.

Finally, for the same reasons as those underlying the Executive Director's determination that annual demand forecast data should be public, the portions of Tables 1 and 2 that show Future Generic Resource Need should also be made public. In upholding that determination, the Commission focused on whether knowledge of the extent of the gap between supply and demand during the single hour of highest demand would affect a utility's bargaining power vis-à-vis its potential suppliers and purchasers. The Commission found the answer to this question was no. IOUs have already agreed that the energy version of this Generic Resource Need can be made public by SCE furnishing its Public S-2 tables, and PG&E and SDG&E furnishing their S-7 tables.

While this aggregation proposal adds information on resources, and further disaggregates demand and resource information to a quarterly level, the same principles lead to the conclusion that the information revealed under this proposal, at either the annual or quarterly level, is not a trade secret:

- data similar to most of the disputed information is publicly available;
- release of the annual or quarterly demand and resource data without specificity about when the single hour of peak demand will occur and how similar that hour is to any other hour during the period diminishes the value of the information; and
- potential sellers can offer a variety of products to meet the utilities needs, and the utilities have additional options for meeting peak demand in addition to purchases from third parties.

Limiting the release of the IOU-specific aggregated data to the years 2009 and beyond also minimizes any potential value of the data because additional suppliers will be able to enter the energy market by that time.

While the demand forecast determination upheld by the Energy Commission related only to annual data, we note that a recent CPUC administrative law judge ruling issued in R.04-04-003 and R.04-04-025 addresses confidential versus public designations for a wide range of data of similar data.[1] We understand this ruling to uphold the confidentiality of hourly and monthly data, but that it orders the IOUs to release quarterly demand forecasts and quarterly forecasts of utility-retained generation costs and production. While the Energy Commission is not bound by CPUC determinations on the public or confidential nature of similar data, this decision does demonstrate that the CPUC, which the Energy Commission has encouraged to be less protective of IOU data, believes that releasing quarterly demand data does not reveal trade secret information.

In discussing these aggregation proposals, IOUs have indicated that they believe any LSE-specific data aggregations should apply equally to all LSEs. Staff plans to apply this proposal only to the IOU data, and not to the ESP data. In general, the staff agrees that similarly situated entities should be treated in similar fashion. However, in this instance, the staff is attempting to provide information to the CPUC on regulated utility activity, and to allow parties that may participate in the CPUC's 2006 long-term procurement proceeding to have access to aggregated data that may be used in that proceeding. The staff does not anticipate including ESP data in the transmittal report to the CPUC, and so does not plan to release a set of ESP-specific aggregation tables based on this proposal. Finally, ESPs have justified their claims for confidentiality of data submitted into this proceeding by noting that they compete against each other, even though under the current suspension of direct access, the ESPs may not compete to acquire additional customers from IOUs. Thus, IOUs and ESPs are not similarly situated, and what is a trade secret for one is not necessarily a trade secret for another. Accordingly, staff believes that making distinctions between the treatment of different subsets of LSEs is justified.

Proposal 2: Aggregation of all LSE Loads and Resources within a Geographic Region

In this proposal, the load forecast and resource plan data from all LSEs serving load within a control area will be aggregated, with the exception of the California Independent System Operator (CAISO) control area. For that control area, the unit of aggregation will be the participating transmission owner (PTO) transmission planning area. Under this proposal, the IOU data would be combined with the data for all ESPs and municipal utilities within that IOU's planning area. As with Proposal 1, data tables would be created in this proposal for each of the four resource plan scenarios provided by the IOUs.

Aggregation of LSE Load Data within Planning Areas

[1] R.04-04-003 and R.04-04-025, Administrative Law Judges' Ruling on Protective Order and Remaining Discovery Disputes, May 9, 2005.

Specifically, staff plans to release aggregated load forecast data for the four major control areas (CAISO, LADWP, SMUD/ WAPA, and a grouping of the smallest control area and fragments of the state in non-California control areas). Table 3 identifies the four control areas and the assignment of LSEs to them and to the subsidiary planning areas of the CAISO control area. Three of these CAISO planning areas are based on the large IOU dominating that geographic region, while one consists of the State Water project within the Department of Water Resources (DWR).

Staff plans to use this aggregation of LSE loads in its demand forecast comparison report, which will compare the staff demand forecast to those provided by the LSEs. This report is scheduled for public release on June 13 and will be discussed at a workshop on June 29. Because LSEs with a peak demand of less than 200 MW were not required to submit demand forecasts, using planning area requires estimation of the loads associated with these small suppliers. Staff has prepared an estimate of peak demand for 2005 for determining the proportion that these loads represent of the total planning area; this estimate is sufficiently small that the smaller entities can be approximated without introducing appreciable error into the overall total.

This aggregation of IOU, ESP and municipal utility load data into three IOU-centric planning areas could create disclosure problems for any of the component LSE elements that need to be protected.[2] However, previous informal discussions with IOUs and ESPs found support for this general approach. Staff's assessment of the confidential data along with public data from municipal utilities and smaller ESPs and municipals that were not required to file in this *2005 Energy Report* cycle indicates that IOU load forecasts are in the range of 80 - 85% of planning area totals for year 2005. This percentage combined with the fact that the number of entities included in the aggregation is at least 10 or more LSEs per planning area sufficiently masks the underlying confidential data of each one of the LSEs.

Aggregation of Individual Resource Plan Scenarios within Planning Areas

LSEs were requested to provide monthly tabulations of individual resources for capacity and energy to serve load in Forms S-1 and S-2, respectively, for four scenarios. As with the reference case resource plans, the S-1 and S-2 forms for each of these alternative scenarios were granted confidentiality. Recognizing that some access to these data were necessary, the three IOUs provided public versions of these resource plan data by aggregating in two dimensions – from monthly to annual, and from resource-specific to resource-category.

Staff plans to provide separate aggregated tables for the individual resource plan scenarios for capacity and for energy on an annual and quarterly basis. These

[2] PG&E and SCE planning areas contain several municipal utilities that filed load forecasts and several more that did not. All three IOU-centric planning areas contain loads of small ESPs <200 MW peak demand that did not submit load forecasts.

scenarios reveal how each IOU proposes to adapt should an alternative future other than the reference case materialize. The size of the adjustments to load most fully characterizes each of the uncertainties about load (core/ non-core, community choice aggregation/ municipal departing load and levels of preferred loading order resources). The resulting resource plan scenario reveals how the IOUs would need to adapt their procurement actions to match such a load forecast when they identified it. The annual and quarterly resource category subtotal values are needed to understand the nature of the differences among the scenarios and the public policy consequences of the various scenarios.

Proposal 3: Further Aggregation Across IOU Resource Plan Scenarios

As a result of informal discussions with IOUs, the staff proposes a third aggregation proposal for capacity values that utilizes broader groupings. The tables in this proposal would collapse the separate capacity scenario tables for a given planning area into a single capacity table. The entries in this table would be the range of corresponding values from the separate scenario tables. If the values were common across all four scenarios, then a single value would be present in the cell. If there were four different values in the corresponding cells of each scenario, then the lowest and highest would be chosen and that range of values shown in the cell. Thus, the more that particular types of resources were affected in the development of the resource plan scenarios, the more that ranges would appear in the table rather than single values and the more that ranges would widen through time.

The interpretation of these tables would be difficult, since changes reflecting multiple sources of uncertainty would be intermingled. Because this proposal can be readily created from the tables in Proposal 2 and provides less information, staff would produce tables under this proposal only in cases where a pending appeal prevents the release of the corresponding Proposal 2 scenario tables. Staff has not included an energy version of this proposal, since the LSEs have informally agreed to Proposal 2 for the energy data.

Timing

The aggregations discussed above will appear as part of staff reports released in June commenting upon LSE submittals. These reports will be discussed in workshops in late June or July. Because of this schedule, and the need for 2005 *Energy Report* participants to utilize the results of these aggregation proposals in lieu of any access to underlying data that has been classified as confidential, it is critical that LSEs express agreement with those portions of this proposal they support as soon as possible, even if there are other portions they intend to oppose.

These plans to release aggregated data may be appealed to the Energy Commission within fourteen days. (Cal. Code Regs., tit. 20, 2507(e)(2).). Any appeal should specify which proposal, or which portion of a proposal, is being appealed. Those specific portions of any proposal that is appealed will not be released while that appeal is pending. In addition to docketing an appeal, copies should be provided to Kevin Kennedy, *Energy Report* project manager and Caryn Holmes, *Energy Report* Committee counsel.

Table 1. Proposed level of detail for release of aggregated annual and quarterly capacity resource data

PEAK DEMAND CALCULATIONS (MW):
- Reference Case Forecast Total Peak Demand
- Load Adjustment for a Scenario (-)
- Uncommitted Price Sensitive DR Programs (-)
- Uncommitted Energy Efficiency (2009-2016) (-)
- Distributed Generation (-)
- Net Peak Demand for Bundled Customers
- Net Peak Demand + 15% Planning Reserve Margin
- Firm Sales Obligations
- **Firm Peak Resource Requirement**

EXISTING & PLANNED RESOURCES

Utility-Controlled Fossil and Nuclear Resources:
- Nuclear
- Fossil
- **Total Dependable Fossil and Nuclear Capacity**

Utility-Controlled Hydroelectric Resources (1-in-2):
- Total for all plants over 30 MW nameplate
- Total for all plants 30 MW nameplate or less
- Pump Storage Generation
- **Total Dependable Hydro Capacity**

Total Utility-Controlled Physical Resources

EXISTING & PLANNED CONTRACTUAL RESOURCES

DWR Must-take Contracts:
- Contract A
- ....
- Contract N
- **Total DWR Contracts**

QF Dependable Capacity
Renewable Contracts
Other Bilateral Contracts
Short Term and Spot Market Purchases

TOTAL: EXISTING & PLANNED CAPACITY

- Existing Interruptible / Emergency (I/E) Programs
- Uncommitted Dispatchable Demand Response

TOTAL CAPACITY + I/E and UDDR

FUTURE GENERIC RESOURCE NEEDS
- Generic Renewable Resources
- Capacity of other Generic Additions
- **Total Capacity of Future Generic Resources**

Note: Dispatchable DWR contracts are included in the Other Bilateral Contracts.

Table 2. Proposed level of detail for release of aggregated annual and quarterly energy resource data

ENERGY DEMAND CALCULATIONS (GWh)
- Reference Case Forecast Total Energy Demand
- Load Adjustment for Scenario (-)
- Uncommitted Energy Efficiency (2009-2016) (-)
- Distributed Generation (-)
- Net Energy Demand for Bundled Customers
- Firm Sales Obligations
- **Total Energy Requirement**

EXISTING & PLANNED RESOURCES

Utility-Controlled Fossil and Nuclear Resources:
- Nuclear
- Fossil
- Hydro
- **Total Fossil and Nuclear Energy Supply**

EXISTING & PLANNED CONTRACTUAL RESOURCES

Must-take DWR Contracts:
- Contract A
- ....
- Contract N
- **Total Energy Supply from DWR Contracts**

- Total Energy Supply from QF Contracts
- Total Existing & Planned Renewable Contracts
- Short Term and Spot Market Purchases

TOTAL: EXISTING & PLANNED ENERGY

FUTURE GENERIC RESOURCE NEEDS
- Generic Renewable Energy
- Generic Resource Addition Energy
- **Total Future Generic Resource Needs**

Note: Dispatchable DWR contracts are included in the **Other Bilateral Contracts.**

Table 3. Definitions of proposed geographic areas for release of aggregated load forecast and resource plan data

Control Area	Component Planning Areas	Filings from LSEs in Area	Implementation Issues
CAISO	PG&E Planning Area (PA)[3]	IOU, ESPs >200 MW, ESPs < 200 MW, Munis	Requires effort to estimate loads for minor Munis and ESPs not submitting data
	SCE PA	IOU, ESPs >200 MW, ESPs < 200 MW, Munis, and MWD	Requires effort to estimate loads for minor Munis and ESPs not submitting data
	SDG&E PA	IOU, ESPs >200 MW, ESPs < 200 MW	Requires effort to estimate loads for minor ESPs not submitting data
	DWR (split into North and South)		Neither staff nor DWR have prepared a DWR demand forecast. DWR is busy with a major water study preceding a load forecast/resource plan effort.
LADWP	Single area	LADWP, Burbank and Glendale	None
SMUD	Single area	SMUD, Roseville, Redding and WAPA direct service	WAPA has not submitted data, but staff received a forecast via the PG&E transmission planning process
Other	Single area	IID, small portions of the Sierra Pacific and PacifiCorp service areas	Some aggregation necessary to protect IID resource plan data granted confidentiality

[3] IOU bundled customers average from 81-85% of the peak load in these planning areas.

Staff Proposed Aggregation for Dependable Capacity Resource Accounting Table - Annual Version
3-Jun-05

STAFF PROPOSED LEVEL OF AGGREGATION

PEAK DEMAND CALCULATIONS (MW):		2009	2010	2011	2012	2013	2014	2015	2016
Reference Case Forecast Total Peak Demand									
Load Adjustment for This Scenario(-)									
Uncommitted Price Sensitive DR Programs (-)									
Uncommitted Energy Efficiency (2009-2016) (-)									
Distributed Generation (-)									
Net Peak Demand									
Net Peak Demand + 15% Planning Reserve Margin									
Firm Sales Obligations									
Firm Peak Resource Requirement									
EXISTING & PLANNED RESOURCES									
Utility-Controlled Fossil and Nuclear Resources:									
Nuclear									
Fossil									
Total Dependable Fossil and Nuclear Capacity									
Utility-Controlled Hydroelectric Resources (1-in-2):									
Total for all plants over 30 MW nameplate									
Total for all plants 30 MW nameplate or less									
Pump Storage Generation									
Total Dependable Hydro Capacity									
Total Utility-Controlled Physical Resources									
EXISTING & PLANNED CONTRACTUAL RESOURCES									
DWR Must-take Contracts:									

Staff Proposed Aggregation for Dependable Capacity Resource Accounting Table - Annual Version
3-Jun-05

STAFF PROPOSED LEVEL OF AGGREGATION

Contract A									
....									
Contract N									
Total DWR Contracts									
QF Dependable Capacity									
Renewable Contracts									
Other Bilateral Contracts									
Short Term and Spot Market Purchases									
TOTAL: EXISTING & PLANNED CAPACITY									
Existing Interruptible / Emergency (I/E) Programs									
Uncommitted Dispatchable Demand Response									
TOTAL CAPACITY + I/E and UDDR									
FUTURE GENERIC RESOURCE NEEDS									
Generic Renewable Resources									
Capacity for other Generic Resources									
Total Capacity of Future Generic Resources									

Note: Dispatchable DWR contracts are included in the **Other Bilateral Contracts.**

Staff Proposed Aggregation for Energy Resource Accounting Table - Annual Version
3-Jun-05

STAFF PROPOSED LEVEL OF AGGREGATION

ENERGY DEMAND CALCULATIONS (GWh)	2009	2010	2011	2012	2013	2014	2015	2016
Refeence Case Forecast Total Energy Demand								
Load Adjustments for this Scenario(-)								
Uncommitted Energy Efficiency (2009-2016) (-)								
Distributed Generation (-)								
Net Energy Demand for Bundled Customers								
Firm Sales Obligations								
Total Energy Requirement								
EXISTING & PLANNED RESOURCES								
Utility-Controlled Fossil and Nuclear Resources:								
Nuclear								
Fossil								
Hydro								
Total Fossil and Nuclear Energy Supply								
EXISTING & PLANNED CONTRACTUAL RESOURCES								
Must-take DWR Contracts:								
Contract A								
....								
Contract N								
Total Energy Supply from DWR Contracts								
QF Contracts:								
Total Energy Supply from QF Contracts								

Staff Proposed Aggregation for Energy Resource Accounting Table - Annual Version
3-Jun-05

STAFF PROPOSED LEVEL OF AGGREGATION

Existing & Planned Renewable Contracts:									
Total Existing & Planned Renewable Contracts									
Other Bilateral Contracts:									
Total Energy Supply from Other Bilateral Contracts									
Short Term and Spot Market Purchases:									
Short Term and Spot Market Purchases									
TOTAL: EXISTING & PLANNED ENERGY									
FUTURE GENERIC RESOURCE NEEDS									
Generic Renewable Energy									
Other Generic Additione for Energy									
Total Future Generic Resource Needs									

Note: Dispatchable DWR contracts are included in the **Other Bilateral Contracts**.

Appendix 2

May 20, 2005

PRELIMINARY COMMENTS OF SCE, PG&E AND SDG&E ON ENERGY COMMISSION PROPOSAL TO AGGREGATE INFORMATION

Thank you for the opportunity to discuss your proposal for publicly disclosing aggregated demand/supply information, which may be used by the California Public Utilities Commission (CPUC) in its 2006 long-term procurement proceeding. These comments are preliminary but represent the joint views of SCE, PG&E, and SDG&E, subject to further details on Energy Commission Staff's proposal that we may receive.

We understand the dilemma faced by Staff : (1) the Energy Commissioners plan to rely solely on information in the public record for their findings and recommendations in both the 2005 Energy Report itself, and the accompanying transmittal to the CPUC; and, at the same time, (2) the Commission is required by law to keep market-sensitive and trade secret Load Serving Entity (LSE) specific information confidential, as disclosing such information to the public (including market participants) would harm LSEs' customers. We appreciate Staff's effort to find a mutually acceptable solution which meets both objectives.

However, as Staff and the Energy Commissioners acknowledge, the information here is not being developed in a vacuum. It is intended to be provided to the CPUC for a very specific purpose in a very specific CPUC proceeding: the CPUC proceeding which will be reviewing the utilities' Long Term Procurement Plans developed and submitted in accordance with Assembly Bill (AB) 57 and various CPUC decisions and rulings. Under the CPUC's Long Term Procurement Plan proceeding, key parts of the information we have provided under confidentiality to the Energy Commission are expressly protected from disclosure to market participants under current orders and rulings of the CPUC and in compliance with Public Utilities Code section 454.5(g), which requires the protection of market sensitive information from public disclosure. The Energy Commission is collaborating with the CPUC in the procurement process and is bound by those confidentiality requirements. We believe that the framework and confidentiality principles applicable on this important CPUC proceeding are a very essential context for

how we and you should review the level of protection that should be provided to the information that is the subject of your aggregation proposal.

We generally agree with the three general approaches to aggregate information, that is: (1) aggregate data on a geographic basis; (2) aggregate monthly data into annual numbers; and (3) aggregate categories of resources.

As we mentioned in our meeting on May 18, however, we have some concerns with the Staff proposal. First, the Staff should treat all load serving entities equally with regard to all public policy considerations. There is no sound public policy to do otherwise. In an environment where a competitive retail market may emerge, it is critical to not advantage any one set of load serving entities over another. This important public policy was recognized when Resource Adequacy requirements were established and it should apply to all other obligations being placed on load serving entities. (Indeed, if the purpose of disclosing data is to track the achievement of Resource Adequacy requirements, the same data must be made available for each LSE.) With regard to Staff's specific proposal for aggregating data, the same standard for disclosing market sensitive information should apply to all LSEs and disclosure should be made accordingly.

Second, with respect to Table 1, Table 2 and Table 3, we have the following concerns and alternative proposals.

As we understand it, the CEC's proposal was to make versions of Table 2 and 3 available both on a planning area basis and for the bundled customers of the individual IOUs. Therefore, we want to comment on Table-2 and Table-3 separately for geographically-aggregated forms and IOU-specific forms.

Demand/supply tables for the planning area

General comments

We understand that the objective of geographic aggregation is to discern the supply/demand balance for the loads within various areas of the state.

However, aggregating the submittal by "IOU transmission planning area" is not the right level of aggregation, since it will not meet the objective stated above.

a. The tables will not show whether LSEs will have sufficient deliverable resources;

b. The tables will not allow the Commission to assess how much new generation is needed and where it should be located; and

c. Tables showing un-contracted positions do not lead to any useful information for determining the need for new generation resources, the types of those resources or their location.

Not only does this aggregation fail to meet any discernible objectives, but it puts sensitive IOU data at risk. As the Staff proposal states, IOU bundled customers' load averages about 85% of the peak demand in each planning area. It is possible to estimate relatively accurately small LSEs' loads and resources and reengineer the IOUs' bundled customer resource needs – particularly if one assumes that the ESPs' needs are filled primarily by contracts.

Therefore, the IOUs would prefer, as an alternative, to aggregate load information by "North/South California" or by NP/SP zones (consistent with transmission constraints). This proposal would seek to evaluate all loads and resources in transmission-constrained areas so that the need for new generation or transmission projects becomes more apparent. This table would not disclose which LSEs are included in the aggregated geographic area, their individual loads, or their specific resources (unless already publicly available).

However, for the 2005 IEPR we are willing to allow Tables aggregated by planning area based on the versions attached to this letter.

Table 2

As we understand it, Commission Staff is proposing to disclose separate tables for each scenario which would reveal specific resource needs. As you mentioned in our

meeting on Wednesday, however, the CPUC had requested only ranges and not specific resource needs.

Therefore, at the planning area level, we propose to prepare only one capacity table which would show the ranges of the various scenarios, including the reference case, preferred case, accelerated renewable and core/non-core scenarios. We have provided a version of this table with the rows that would be acceptable as Table S-1.

Table 3

As you mentioned in the meeting, the energy table is less problematic and we agree. The energy tables aggregated at the planning area are acceptable, and the IOUs could accept disclosure of ranges of the data based on the Table S-2 that is attached.

Capacity/energy tables for the IOU bundled customers

Table 2

As we understand it, the CEC Staff proposed to disclose individual IOU bundled customer capacity information for each scenario. Disclosing LSE-specific capacity data is the most problematic part of the Staff proposal. The current proposal revealing IOUs' residual resource needs on an annual basis starting 2006 is not acceptable. It is the single most market-sensitive, trade secret data we hold, as each utility procures, generally, to meet that level for third quarter products. Each of the respective IOUs is committed to protect this information. This would potentially include seeking writs of mandate in court.

The IOU's have already provided public data regarding their capacity position (S-1 Public Forms or S-6 Forms filed as part of our March 1 and April 1, 2005 filings). The IOUs cannot agree to allow any further disclosure at this time. Disclosure of the range of energy (not capacity) needs appears to be sufficient to meet the CEC's and CPUC's objectives.

Table 3

As we understand it, Staff is also proposing to disclose energy information for each scenario which would reveal residual resource needs.

As we mentioned Wednesday, we have two concerns with the proposal at the IOU specific level. First, the proposed table would disclose annual data for the first three years beginning in 2006. This information would have little value for developing new resources in the State but is valuable, market-sensitive information that market participants can use against buyers to meet short-term procurement requirements. We note that PG&E has not requested confidential treatment of its annual energy data for the first three years, 2006-2008. Second, Staff proposed to prepare separate tables for each scenario which would reveal residual resource needs for that scenario. As you mentioned yesterday, the CPUC requested ranges and not specific residual resource needs.

Therefore, the IOUs propose that Staff provide a range for each LSE's resource needs based on the scenarios the LSEs filed with the Commission, and to disclose this information only beginning in 2009 based on the table S-3 included with this letter. This should apply to all LSEs.

Potential additional Tables

Since the IOUs removed some level of disaggregation from the CEC proposed format that the CEC may find useful in public forums, the IOUs are willing to work with the CEC on developing additional tables. As an example, the IOUs would not object to a table that shows the generic needs by type on an SP/NP basis.

We believe that this proposal reflects the solution we discussed in our meeting and would be a workable approach to ensure balancing the Commission's preferences and our concerns about revealing market sensitive information to market participants. This proposal would also ensure expedited disclosure of the aggregated information to meet the Commission's timeline.

Proposed Aggregation for Planning Area Dependable Capacity Resource Accounting Table S-1
20-May-05

PROPOSED LEVEL OF AGGREGATION

PEAK DEMAND CALCULATIONS (MW):	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Forecast Total Peak Demand											
Uncommitted Price Sensitive DR Programs (-)											
Uncommitted Energy Efficiency (2009-2016) (-)											
Distributed Generation (-)											
Net Peak Demand + 15% Planning Reserve Margin											
Firm Sales Obligations											
Firm Peak Resource Requirement											
EXISTING & PLANNED RESOURCES											
LSE-Controlled Fossil and Nuclear Resources:											
Nuclear											
Fossil											
Total Dependable Fossil and Nuclear Capacity											

LSE-Controlled Hydroelectric Resources (1-in-2):											
Total for all plants over 30 MW nameplate											
Total for all plants 30 MW nameplate or less											
Pump Storage Generation											
Total Dependable Hydro Capacity											
Total LSE-Controlled Physical Resources											
EXISTING & PLANNED CONTRACTUAL RESOURCES											
DWR Must-take Contracts:											
Contract A											

Proposed Aggregation for Planning Area Dependable Capacity Resource Accounting Table S-1
20-May-05

PROPOSED LEVEL OF AGGREGATION

....											
Contract N											
Total DWR Contracts											
Existing & Forecasted QF Dependable Capacity											
Existing & Forecasted Renewable Contracts											
Other Bilateral Contracts including DWR Dispatchable Contracts											
TOTAL: EXISTING & PLANNED CAPACITY											
Existing Interruptible / Emergency (I/E) Programs											
Uncommitted Dispatchable Demand Response											
TOTAL CAPACITY + I/E and UDDR											
FUTURE GENERIC RESOURCE NEEDS											
Capacity for Baseload, Load Following and Peaking Resources											
Total Capacity of Future Generic Resources											

Proposed Aggregation for Planning Area Energy Accounting Table S-2
20-May-05

PROPOSED LEVEL OF AGGREGATION

ENERGY DEMAND CALCULATIONS (GWh)	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Forecast Total Energy Demand											
Uncommitted Energy Efficiency (2009-2016) (-)											
Distributed Generation (-)											
Firm Sales Obligations											
Total Energy Requirement											

EXISTING & PLANNED RESOURCES											
LSE-Controlled Fossil and Nuclear Resources:											
Nuclear											
Fossil											
Hydro											
Total Fossil and Nuclear Energy Supply											

EXISTING & PLANNED CONTRACTUAL RESOURCES											
Must-take DWR Contracts:											
Contract A											
....											
Contract N											
Total Energy Supply from DWR Contracts											

Existing & Forecasted QF Contracts:											
Total Energy Supply from QF Contracts											

Proposed Aggregation for Planning Area Energy Accounting Table S-2
20-May-05

PROPOSED LEVEL OF AGGREGATION											
Existing & Forecasted Renewable Contracts:											
Total Energy Supply from Renewable Contracts											
Other Bilateral Contracts:											
Total Energy Supply from Other Bilateral Contracts and DWR Dispatchable Contracts											
Short Term and Spot Market Purchases:											
Short Term and Spot Market Purchases (1)											
TOTAL: EXISTING & PLANNED ENERGY											
FUTURE GENERIC RESOURCE NEEDS											
Generic Baseload, Load-following and Peaking Energy											
Total Future Generic Resource Needs											

(1) Net of sales

Proposed Aggregation for LSE Specific Energy Resource Accounting Table S-3
20-May-05

PROPOSED LEVEL OF AGGREGATION

ENERGY DEMAND CALCULATIONS (GWh)	2009	2010	2011	2012	2013	2014	2015	2016
Net Energy Demand for Bundled Customers								
Firm Sales Obligations								
Total Energy Requirement								
EXISTING & PLANNED RESOURCES								
Utility-Controlled Fossil and Nuclear Resources:								
Nuclear								
Fossil								
Hydro								
Total Fossil and Nuclear Energy Supply								
EXISTING & PLANNED CONTRACTUAL RESOURCES								
Must-take DWR Contracts:								
Contract A								
....								
Contract N								
Total Energy Supply from DWR Contracts								
Existing and Foreasted QF Contracts								
Total Energy Supply from QF Contracts								
Existing & Forecasted Renewable Contracts:								
Total Existing & Planned Renewable Contracts								

Proposed Aggregation for LSE Specific Energy Resource Accounting Table S-3
20-May-05

PROPOSED LEVEL OF AGGREGATION

Other Bilateral Contracts:								
Total Energy Supply from Other Bilateral Contracts and DWR Dispatchable Contracts								
Short Term and Spot Market Purchases:								
Short Term and Spot Market Purchases (1)								
TOTAL: EXISTING & PLANNED ENERGY								
FUTURE GENERIC RESOURCE NEEDS								
Generic baseload, Load-following and Peaking Energy								
Total Future Generic Resource Needs								

(1) Net of sales

Appendix 3

DECLARATION OF CHARLES R. PLOTT

I, Charles R. Plott, declare:

1. I am the Edward S. Harkness Professor of Economics and Political Science at the California Institute of Technology in Pasadena, California. My primary research area includes behavioral foundations of economics and political science, laboratory experimental methods, regulation, deregulation and policy design. I have over forty years experience in those fields. I have a Bachelor's degree in Production Management from Oklahoma State University, a Master's degree in Economics from Oklahoma State University and a Doctorate degree in Economics from the University of Virginia. I am the co-author of the study "Forced Information Dislosure and the Fallacy of Transparency in Markets," in which I summarized the results of my experimental economic analysis of the impact on markets, particularly the California electricity market, of the disclosure of private information by market participants. (This study is attached hereto as Exhibit A, and will be published in an upcoming issue of the journal *Economic Inquiry*.) As such, I have special knowledge, skill, experience, training and education necessary to form an opinion on the topic of information disclosure and its effect on the California electricity market.

2. Moreover, the experiments discussed in the study were conducted under my supervision. As such, I have personal knowledge of them and I could testify competently about them if called as a witness. A full description of those experiments is set forth in the study and is incorporated herein by reference.

3. I am making this declaration to explain how revealing to power producers the amount of utility-specific information the Califonia Energy Commission (Commission) intends to disclose will reduce competition and increase prices.

4. My experimental analysis demonstrated that requiring Investor-Owned Utilities (IOUs) to reveal their net-short position to power suppliers will result in higher electricity prices for the public. Knowing residual net short alone is sufficient for suppliers to manipulate

prices. Even if the Commission intends to reveal the capacity net short information three years out from 2006, it will still be relevant, since IOUs routinely procure power five years forward.

5. This proposition follows from two economic facts. First, competitors can deduce the power capacity that the IOUs plan to purchase in the market from knowledge of the residual net short. Second, a natural consequence of knowledge among the power suppliers of the amount of capacity that the IOUs plan to purchase is an increase in the prices that the company will pay. While the amount of any price impact will vary according to the circumstances, the general competitive consequence is in only one direction – price increases. In the case of electricity, this upward pressure can result in substantial price spikes.

6. That higher prices will result follows from well established and well tested principles of market behavior. The tendency is a natural consequence of the strategic behaviors that exist in the marketplace. The failure of regulators to appreciate the fact that strategic behavior is ever present in markets often results in poorly-designed markets that do not properly channel competition into its role of protecting the public. The Notice of Intent to Release Aggregated Data at issue here is a good example.

7. The first question is whether the amount of capacity that the IOUs will purchase can be deduced from knowledge of the net short positions. The IOUs must meet the peak demand (plus reserve requirements) of their customers. They do not know when that peak will occur, but they must have sufficient available capacity to deliver the power when it does occur. Thus, the net short reveals almost exactly how much capacity the IOUs must buy from suppliers.

8. A second question is whether common knowledge of the amount that the IOUs plan to purchase will result in higher prices. The principles at work to produce higher prices have been demonstrated in many different contexts. It is well established that the larger the number of competitors attempting to supply power, the lower will be the prices that the company must pay.

9. Common sense supports the principle. It works through a combination of numbers and uncertainty on the part of each competitor about what other competitors will do.

Each competitor must adjust for that uncertainty through concessions to the buyer. Thus, a reduction in the number of competitors will reduce competition and place upward pressure on prices. Likewise, making critical information available to some competitors (suppliers, in this case) leads to higher prices being paid by others (the customers of the IOUs.)

10. An important fact is that, in essence, those who sell power to the IOUs are in competition with the capacity already contracted for and owned by the IOUs. If the capacity held by the IOUs is known to the sellers, the uncertainty from that competitive source is removed and competition itself is reduced. Thus, a source that holds prices down is removed and the tendency is for prices to increase. Revelation of the IOUs' strategy has the same effect as removing the uncertainty associated with one of the competitors. Revealing IOU confidential net short information would be equivalent to asking one card player in a poker tournament to play his or her hands face up while all other players do not reveal their cards. The cost of poker for the "face up" player would be much higher because the other players would have superior knowledge and could adjust their bets accordingly.

11. In the special case of electricity demand this tendency for prices to increase becomes exacerbated. Because of the nature of the demand for electricity and the company's requirement to meet that demand, knowledge of the quantity that the IOUs plan to purchase is sufficient to reveal economically significant features of their willingness to pay for power.

12. A commonly known, collective "target" is created for suppliers, and if that "target" is reached by the competitive suppliers the prices that all of them will be paid will increase significantly. Thus, in addition to the natural reduction in competition, the information creates incentives among competitors that also foretell upward pressures on prices.

13. Figure 1 and Figure 2 outline the tendency described above in a graphical form.

14. The basic law of supply and demand governs prices paid by the company for power. Figure 1 (attached as Exhibit B) demonstrates the shape of the demand for power faced by the power suppliers. The IOUs' demand for power has a very distinctive shape. It is dictated by the high value of electricity to the consumers, the substantial inelasticity, or insensitivity of consumer demands to price (large variations in price do not influence

consumption patterns) and the sensitivity of customer demand to weather conditions. This creates a peak demand that must be met. The time of that demand is uncertain, so the company must purchase enough capacity to meet the need when it occurs.

15. The key factor is the net short demand – the difference between the electricity supply upon which the company can call and the expected peak demand. The willingness to pay is very high until the capacity to cover the expected peak (including any reserve margin) is reached, and then the willingness to pay drops dramatically due to the inelasticity of demand, the insensitivity of demand to price.

16. The company must meet the peak needs at almost any price, but additional capacity has much less value, since the company has little need to purchase capacity beyond that. The company's net short position reveals that drop in willingness to pay.

17. Figure 2 (attached as Exhibit C) illustrates the source of the incentive for competitive suppliers to adjust their strategies in the light of the information. With net short demand known to them, suppliers have a collective incentive to hold back supply a little in the expectation of pushing up the prices. The suppliers' holding supply a bit results in slightly less resource supply than the net short demand of the company, and this scarce supply relative to demand has a collective impact of increasing prices sharply.

18. Each supplier, realizing the incentives of other suppliers, has a reinforced incentive to raise prices bid in the competitive solicitation. Furthermore, as the solicitations proceed in time the needs of the company become more visible to the suppliers, who can collectively realize the "squeeze" if the company has failed to meet its needs. California consumers are well aware of such "squeezes" and if regulations effectively tie the strategic hands of the company, consumers will become aware of the squeezes in the future.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on June 17, 2005 at Pasadena, California.

Charles R. Plott

Exhibit A

DIVISION OF THE HUMANITIES AND SOCIAL SCIENCES
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FORCED INFORMATION DISCLOSURE AND THE FALLACY OF TRANSPARENCY IN MARKETS

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Forced Information Disclosure and the Fallacy of Transparency in Markets*

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June 25, 2004

Abstract

The research addresses a widely held belief among regulators that any additional information about the objectives and intentions of one side of a market made available to other market participants will improve market performance. The belief is about the principles of market behavior in general in that the coordination of exchange will be better facilitated by any such information revelation and both sides will be better off. The experiment reported here is specifically motivated by regulatory hearings before the California Public Utility Commission on the California wholesale electricity market. Electricity suppliers argue that the California public would pay lower prices if the market demand by the major (public utility) buyers is known to sellers. The markets studied are in the form of decentralized, privately negotiated contracts, typical of the wholesale electricity markets. The experiment demonstrates that such markets generally converge to the competitive equilibrium. However, forced disclosure of demand works to the disadvantage of the disclosing side of the market. If the principles of market adjustment observed in the laboratory are also operating in the California wholesale electricity market, the proposed regulation forcing such disclosure would result in higher electricity prices for the consuming California public.

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Forced Information Disclosure and the Fallacy of Transparency in Markets

Timothy N. Cason and Charles R. Plott

"...ratepayers (i.e. California consumers) are aided when market participants have access to this level of [comprehensive utility planning data] information ...market participants (e.g. generators, energy service providers...) are able to more effectively plan to meet the demands of ratepayers...[to] develop the most efficient and cost-effective solution to meeting product demand." (page 8, Comments of the Independent Energy Producers Association Concerning Data Confidentiality, 2004)

"The C[alifornia] E[nergy] C[omission] does not believe that California ratepayers will be harmed by a more transparent system." (page 4) "...[it] believes all planning 'facts' ought to be publicly available." (page 7, California Energy Commission's Comments on Confidentiality of Planning and Procurement Information, 2004)

1. Introduction

The preceding quotes, taken at face value, suggest that some commentators believe that more information about the objectives of one side of a market made available to the other side of the market always improves the advantages of the market for all. One often sees the term *transparency* to describe a wholesome objective for regulated markets, referring to the disclosure of private information by market participants. The belief is about the fundamental principles of price discovery in markets; that the law of supply and demand operate neutrally and more efficiently if all information is public. This view is reflected, for example, in the "sunshine" provisions of regulatory rulemaking in many states, as well as advice for financial markets from the IMF (2001).

But is more information always better? Motivated by a dispute over information disclosure proposed for California's regulated utilities, this paper presents laboratory evidence that forcing only some parties to reveal private information when bargaining with others can result in inferior terms of trade for the revealing agents. In other words, forcing the utilities to

reveal confidential information regarding their energy demands to suppliers leads to higher negotiated prices and ultimately higher electricity prices for California consumers. The fallacy is that greater information in markets necessarily improves market performance from the point of view of all participants. While no detailed theory that leads to this view is offered, the fallacy itself appears to rest on a flawed interpretation of the law of supply and demand along the following lines: *Efficient market equilibration is identified with the Nash Equilibrium of an associated game theory model. For the game to equilibrate at an efficient Nash equilibrium compete information about player utility functions must be necessary. Therefore, markets will work better if the utility functions are known to all.* Of course, every sentence of the above argument can be challenged as incorrect.

Our experiment evaluates the market implications of greater information dissemination based on a static environment without endogenous entry or exit of suppliers. The quotes above for California, as well as the position of the European Federation of Energy Traders, indicate that commentators believe that one benefit of greater transparency arises through more efficient entry decisions.[1] Although the experiment does not address these long run considerations directly, it does provide some indirect evidence that entry could be attracted by greater information dissemination because the information leads to higher prices and profits of suppliers. But if this information release ultimately leads to lower costs to the buying utilities due to increased entry, utilities should not need additional regulations to force them to reveal their planning and procurement data.

Before presenting details of the experimental design, it is useful to first present some background of the motivating controversy in the California electricity market that serves to

[1] "Poor access to information raises a huge barrier to the entry of new market participants and is stifling the development of efficient, transparent wholesale markets" (page 1, EFET, 2003).

characterize the manner in which the fallacy finds its way into important regulatory discussions. Overall, about one-third of the energy requirements of California's investor-owned electric utilities are met by utility-owned generation. The remaining two-thirds are bought from independent power producers, other out-of-state utilities, and federal power projects such as the Bonneville Power Administration. While some of this power is bought on centralized spot markets, most is procured through short term (a year or less) and medium term (one to five years) contracts that are negotiated with these suppliers.

The relationship between California's electric utilities and third party intervenors such as The Utility Reform Network (TURN) and the Office of Ratepayer Advocates (ORA) has been strained over the years, particularly recently because of the well-publicized problems with energy pricing in the state. Starting in 2002 these intervenors, supported by market participants who sell power to California utilities, sought to require the utilities to publicly release substantial amounts of short- and long-term planning data to all market participants, including all product, price, forecast and availability information contained in the utilities' procurement-related activities and applications. The intervenors and suppliers argued that this increased the market's transparency and will operate to the benefit of the electricity consuming public. In the utilities' opinion, however, revealing such detailed data is tantamount to revealing all of their relevant demand information to potential suppliers prior to initiating negotiations.

Through a series of hearings, administrative law judge rulings and negotiated settlements between the utilities and the intervenors during 2002 and 2003, the utilities either agreed to or were ordered to provide some additional information that had previously been considered confidential. Some planning and forecast data, as well as short-term procurement plans, for example, are now released but with a lag of several years. Other "market sensitive" information was not to be released. Nevertheless, in an April 3, 2003 ruling, the judges and the Public

Utilities Commission expressed intent to revisit their approach governing the treatment of confidential information, to improve "transparency in resource planning." The utilities strongly oppose releasing more information to the suppliers, and the suppliers strongly support receiving additional information from the utilities.[2]

It is well recognized in economics, of course, that as long as interests of bargainers are not sufficiently integrative (i.e., are not largely aligned with common interests) then providing private information to a bargaining opponent can make the revealing party no better off. This is true of most economics problems such as bargaining over predominantly distributive attributes like price. For example, see Kennan and Wilson (1993) for an overview of bargaining models with private information. In regulatory disputes like this, however, theoretical arguments may not carry as much weight as clear, empirical evidence. To make a clear comparison between market outcomes with and without information disclosure using field data would require at least two different regulatory territories with different disclosure rules but similar market conditions (e.g., number of utilities, suppliers, power exchanges, procurement rules, weather conditions, etc.). But as any Californian will tell you, California is a unique place. Therefore, an accurate empirical evaluation of the information disclosure rules, holding other market conditions constant, is not feasible with field data. Empirical evidence, however, can be provided by a laboratory study.

Our laboratory experiment consists of 17 separate market sessions. We consider 5 separate environments, as explained in Section 3. All experiments are conducted in a new laboratory trading mechanism, described in Section 2, meant to capture many of the salient features of a market with multilateral, private pairwise negotiations, with no public transaction

[2] The California Energy Commission (2004) has weighed in on the side of the suppliers. Notably, the CEC also recommends that suppliers be allowed to keep their fuel prices confidential for 6 months, because such information provides a basis for a competitive edge among competing suppliers. That is, they argue that suppliers should be able to keep their costs private while utilities should be required to reveal more quantitative details about demand.

price information. This provides a reasonable approximation to the process of negotiating contracts for energy in California, where only the very short term (day ahead and hour ahead) needs are priced in centralized markets.

Section 4 presents the results. We find that negotiated prices tend to favor the information advantaged side of the market; e.g., prices were higher when buyers' demand information was revealed to sellers than when sellers' cost information was revealed to buyers. This advantage occurs both in the adjustment phase as prices are moving towards equilibrium, as well as after equilibrium is reached. Finally, we find that when sellers are informed about demand conditions and their own costs, prices are more sensitive to changes in demand conditions than changes in supply (cost) conditions.

To our knowledge, this is the first experimental paper that studies this type of information asymmetry in multilateral negotiations. Several previous studies, however, have introduced information asymmetries to bilateral negotiations. Murnighan et al. (1999) formed bargaining pairs and then privately provided information about both bargainers' payoff schedules to one member of the pair. The pairs negotiated over multiple dimensions, including some with distributive characteristics (like price) as well as others with integrative, cooperative characteristics. In face-to-face bargaining, the information provided to one member of the pair allowed that member to negotiate more favorable outcomes compared to a control treatment with symmetrically, partially informed bargainers. But asymmetrically informed bargainers were not able to negotiate more favorable settlements when negotiations were conducted through computer chat windows. Roth and Murnighan (1982) also compare symmetric and asymmetric information bargains struck over computerized chats, but over lottery "chips" for prizes of known and unknown value. They find that the asymmetrically informed member of the bargaining pair is able to earn more than his counterpart.

Srivastava et al. (2000) also asymmetrically inform one member of the bargaining pair, who like in our study negotiate only over price. Both bargainers know the item's cost, but only the buyer knows the value v she places on the item. The researchers do not employ a control treatment with symmetrically informed bargainers, and they employ alternating offer bargaining, control beliefs over the buyer's value v, and vary the degree of uncertainty over v as a main treatment variable. The authors employ this careful information structure because they evaluate specific predictions of the Grossman and Perry (1986) sequential equilibrium model of bargaining. Srivastava et al.'s results provide some reasonable support for key comparative static predictions, but they strongly reject the point predictions of the model.

2. The Trading Institution

Our goal was to capture some salient features of the multilateral but private, pairwise negotiations that characterize the price discovery process in the wholesale market for electricity in California. We chose this market structure for the experiment over classical open outcry markets for three reasons. First, the fallacy described above typically is found in regulatory discussions in industries in which the industrial organization is more decentralized, with localized, private contracts much the same as the California wholesale electricity industry. Second, it is well known from the study of insiders in open outcry markets that the information held by insiders quickly disseminates throughout the market and thus the effects of any asymmetries of information are typically small and hard to detect (Plott and Sunder, 1988, Forsythe and Lundholm, 1990). We wanted to study the effects in a context in which the principles at work can be more easily observed and studied. Third, in the California wholesale electricity markets contract terms following a successful negotiation are private information, so this market does not feature any public transaction price information. Participants can negotiate

simultaneously with different potential trading partners, and any agent is free to initiate or terminate negotiations with an agent on the other side of the market at any time. Clearly, therefore, the outside option for any negotiation is endogenous and is determined by trading terms available from alternative trading partners.

Most previous market experiments feature centralization of offers and/or transaction prices, so we required a new laboratory trading institution for these multilateral but private negotiations. A classic "telephone" market, such as the one used in Hong and Plott (1982) and in Grether and Plott (1984), could capture many of the key features of this type of negotiation process. The message space for telephone negotiations is rather rich, however, and can include intimidation, unverifiable claims and persuasion. Therefore, we employed a computer-mediated negotiation process to increase control and limit the message space to the main variable of interest: price offers.

Figure 1 displays the main trading screen for the *Marketscape* program used to capture the key features of private, multilateral negotiations. Buyer 125, for example, receives price offers from sellers in his "X125 Personal Market," and they are listed in ascending order in his personal sell order book shown at the lower right of the screen. He accepts the best offer by clicking on a checkbox and then clicking the ACCEPT button. This buyer can also send price offers to specific sellers by filling out the order form shown on the upper right of this screen. He can revise or add additional offers and cancel any outstanding offers at any time. However, he must select only one "market" to send any offer to, and only one seller (i.e., that seller's personal market) can view those particular offers. Therefore, individual negotiations between any pair of potential traders are private, but traders can negotiate simultaneously with multiple potential trading partners. There is no public reporting of transaction prices, but traders can always access their own personal trade history.

Although this particular form of computer-mediated negotiation is not found in the field, where many different forms of market exist, it is relevant for the policy question that is the focus of our research. We are interested in the impact of information asymmetry on market outcomes, and this trading process carefully controls the information exchanged through bargaining. The negotiation also permits a rich exchange of price information, without allowing more difficult-to-control factors such as bargaining personality and style to influence results. Of course, the free-form nature of this bargaining, unlike other structured mechanisms such as alternating offer bargaining, limits the applicability of most theoretical models of the bargaining process. But it more accurately represents the opportunities and constraints of the negotiation process for energy contracts.

3. Experimental Environment and Design

In any market, the major underlying behavioral motivations of buyers and sellers can be captured in "reduced form" in demand and supply curves. Thus, to the extent that buyer information is disclosed to sellers, this is similar to disclosing information about the buyers' demand curve. Of course, there are various amounts of buyer information that could be disclosed, but each piece will reveal something about the demand curve. There is a considerable range of data that the Public Utilities Commission is considering compelling utilities to reveal, but the scope of information disclosure being considered is tantamount to revealing all the information sufficient to define a buyer's demand curve. Therefore, the experimental design is based on this broad degree of information revelation. Although the Commission might ultimately choose a more limited degree of information revelation, the current experimental design should shed light on the direction of general effects that can be expected if more limited amounts of information are ultimately revealed.

As is the usual case in markets, each trader knew his or her own trading motivations—that is, sellers knew their own production costs and buyers knew their own valuations for any units they purchase. For the sessions labeled as "Sellers Informed," however, the sellers all received information (available at any time through a "Payoff Summary" link on their computer screen) about the minimum amounts that each buyer valued each unit that they might purchase. The fact that sellers were informed was common knowledge, but the content of this valuation information was only distributed to the sellers. Buyers only knew their own valuations and did not receive any information on seller costs or other buyers' values, as in the usual case. Asymmetric information was distributed analogously in sessions labeled as "Buyers Informed"; in these sessions, buyers all knew the maximum amount of each seller's cost for each unit potentially supplied, but sellers only knew their own costs.

For the analysis we divide the 17 experimental sessions into five designs, with two to five replications for each design, as summarized in Table 1.

1. Design A has induced supply and demand arrays shown in Figure 2, or a similar variation with slightly different numbers of buyers and sellers. The distinguishing feature of this design is that it has a narrow range of competitive equilibrium (CE) prices, or in some cases a unique CE price.
2. Design B has supply and demand arrays shown in Figure 3. The distinguishing feature of this design is that it has a much wider range of competitive equilibrium prices. All prices in the interval [475, 600] are equilibrium prices in which the quantity supplied equals the quantity demanded.
3. Design C features a variety of upward demand shifts in different periods, and one supply shift in an early period. The demand shifts are displayed in the supply and demand arrays shown in Figure 4.

4. Design D features a shift in both demand and supply in period 7, which widens the competitive equilibrium price interval in either the downward or upward direction. Figure 5 displays the downward shift employed in two sessions; the other two sessions of this design used a mirror image upward shift in the equilibrium interval.
5. Design E first shifts the supply function (in period 6) and then shifts the demand function (in period 10), as shown in Figure 6.

Both Designs A and B have substantial symmetries between the demand side and the supply side. We began with symmetric demand and supply conditions to control for any influences that demand and supply shapes might have on the convergence process and that might obscure the separate impact of information disclosure.[3] Thus, while these curves might not reflect the conditions of the California electricity market, they do allow us to study how the proposed information revelations will influence the functioning of the fundamental laws of supply and demand.

Design C serves two functions. First, the design is a robustness check on the overall patterns of results derived from the other designs. The design involves a series of demand and supply shifts rather than the single demand or supply shifts of the other design. It also incorporates information revelation about demands and supplies that are not coincident with parameter changes, so information shifts that might be contained in market activity alone is not confounded with the information provided through regulations to one side of the market or the other. Secondly, the design is especially relevant for exploring the issues of the California electricity market. In this design, the supply curves used in the experimental markets have important qualitative features that broadly correspond to the features found in electricity markets.

[3] One of the early discoveries made using laboratory markets was that prices tend to converge from above (below) the competitive equilibrium when equilibrium surplus is larger for buyers (sellers) (Smith and Williams, 1982).

Supply is "flat" over a broad range and then turns upward sharply as capacity limits are approached. Demand, on the other hand, is very inelastic and grows from one period to the next. These are important similarities with the situation that can be expected to evolve in California as demand for electricity grows due to growing population, short-run supply is inelastic, and the elasticity of long-run supply is highly uncertain due the financial stress in the generation development market. Thus, the design tests for the possibility that the particular parameters present in the regulatory dispute that partially motivates the study do not have implications for the principles that are at work.

Designs D and E, like Designs A and B, are not intended to be consistent with specific underlying properties of the California electricity market. Instead, we chose these parameters to further investigate how the information advantage enjoyed by one side of the market affects adjustment to new equilibrium conditions. The designs also provide insight into how information is disseminated through bargaining in this multilateral negotiation institution.

The other variable that we systematically changed from one experimental session to another was whether the supply side or the demand side of the market was asymmetrically blessed with knowledge about the other side. In 13 of the 17 sessions, the sellers were given detailed information about the minimum value that units were worth to buyers. For shorthand we refer to these as "Sellers-Informed" sessions. In the two Design C sessions, the sellers received this information in period 5, and it was not updated until period 9. In the other sessions, the sellers received this information before the first period and they were continually kept up to date about changing information about the buyers.

While it is not the current issue in California, for an understanding of the symmetry in the other 4 sessions the buyers were given detailed information about the maximum cost that sellers

incurred to produce units. We refer to these as "Buyers-Informed" sessions, which can be used as controls to identify the effect of information disclosures.

As highlighted in Table 1, about one-half of the sessions were conducted at Caltech and one half at Purdue University. All sessions used the identical Marketscape trading program, running on a server located in the Caltech lab. All subjects underwent substantial Marketscape training prior to participating in these sessions, which included "practice" negotiation and trading with robot trading partners. The specific instructions for the sessions reported here, shown in Appendix A, were distributed to subjects and read orally by the experimenter while displayed on an overhead projector. Period 1 of each session (not reported) was a practice period that did count in the subjects' final cash earnings. The exchange rate of experimental currency to dollars varied across design parameters, calibrated to provide average earnings than ranged from about $25 to $40 for the sessions that lasted between 2 and 2.5 hours.

4. Results

Our first result confirms that the general market convergence properties observed in previous auction-type and exchange-type experimental markets also operates in these bilateral-negotiation markets.[4]

Result 1:

Prices in the bilateral negotiation markets converge to a competitive equilibrium under stable supply-demand condition: (i) average prices approach the competitive equilibrium level and (ii) the variance of prices across contracts declines over time.

[4] All of the results exclude the small number of transactions that were clearly typographical errors because they differed from other transaction prices by at least one order of magnitude; for example, a price of 57 when all recent transaction prices ranged between 575 and 600. This excludes 48 of the 3351 transactions in the 17 sessions (1.4 percent).

Support: Despite the decentralized nature of trading and price information, prices move towards and usually reach the competitive equilibrium price range in the sessions reported here. Figure 7 presents all the transaction prices in session 040207 to illustrate this price convergence. Early prices are volatile and many are significantly lower than the equilibrium price range, but eventually most prices are within the equilibrium range. Table 2 summarizes the deviations of the median prices from the competitive equilibrium for all sessions that began with at least 5 periods of stable supply and demand conditions (that is, all designs except Design C). The first column displays the deviations of the median transaction price in the first paying period (period 2), and the middle column displays the deviations in period 5. All median prices lie within the wide equilibrium price interval in Design B, but period 2 median prices frequently deviate from the equilibrium in the other designs. The median absolute deviations decline significantly from period 2 to period 5, based on the 15 statistically independent pairwise differences shown in the right column (nonparametric Wilcoxon signed rank test p-value=0.031, one-tailed).

Price movements toward the competitive equilibrium interval are clearly evident in Table 2. However, by "convergence" in these types of markets, we mean more than simply a tendency for average or median prices to approach the equilibrium level. In addition to average prices that approach equilibrium, convergence also requires price dispersion to decline toward zero. That is, we expect the "law of one price" to prevail in markets that have converged. Figure 8 presents evidence on this dimension of convergence. For each period and for each session (except those in Design C) the figure displays the standard errors of the mean associated with the average transaction prices up until the first shift in supply and demand. In most sessions the price dispersion, as shown on the vertical axis, is high during the early periods. As the periods progress the dispersion falls dramatically in the sense that early dispersion is on the order of two to five times that of later periods. In other words, competitive pressures are bringing the prices

together, even though price information is never publicly displayed and traders can only infer prices through their bilateral negotiations with other traders.[5]

The next result presents the most important conclusion from the experiment: the relationship between pricing outcomes and the asymmetric distribution of information.

Result 2:

Information confers a pricing advantage, particularly during the equilibration phase of market interactions when prices are adjusting toward equilibrium.

Support: Consider Figures 9 and 10, which show the median transaction prices for each period and each session in Designs A and B. The Buyers-Informed sessions are identified with the triangle and the cross in both figures. In Design A (Figure 9), for all periods except one the maximum median price in any Buyers-Informed session is lower than the minimum median price in any Sellers-Informed session. Pooling the data in Design A across sessions and periods, we find that prices are on average 7 percent higher when sellers are informed (484) than when buyers are informed (453). Likewise, in Design B (Figure 10) median transaction prices are also usually higher in the Sellers-Informed sessions than in the Buyers-Informed sessions. Pooling across sessions and periods in Design B, prices are on average 8 percent higher when sellers are informed (555) than when buyers are informed (516).

Prior to the mid-session shift, Design D has the same supply and demand configuration as Design A. This design therefore provides 4 additional sessions (all with sellers informed) to add to the 9 Design A and B sessions shown in Figures 9 and 10 for a statistical comparison of prices in the two information treatments. For this comparison we use the period 5 (median price – competitive equilibrium price midpoint) deviations for each session in designs A, B and D to

[5] Another criteria of convergence often used when analyzing laboratory markets is increasing trading efficiency. Our markets were highly efficient, but relative efficiency differed across designs due to differences in underlying value and cost conditions (i.e., displayed in Figures 2 through 6). Our experimental design does not include sessions without information disclosure, so it cannot determine whether forced disclosure increases or decreases efficiency.

provide comparable pre-shift prices in all sessions. These deviations are positive in only one of the four buyers informed sessions, but are positive in five of the nine sellers informed sessions. A nonparametric Mann-Whitney test, based on the 13 statistically independent session observations, marginally rejects the hypothesis that these period 5 deviations are not different in the two treatments in favor of the one-sided alternative that prices are higher when sellers are informed about buyer values (p-value=0.087, N_A=9, N_B=4). We draw a similar conclusion from a simple cross-sectional OLS regression that employs one period 5 price deviation observation per session, which allows us to control for design differences with a Design B dummy variable. The point estimate indicates a 21 franc higher median price when sellers are informed (standard error 12.7, one-tailed p-value=0.065).

Result 3:

The pricing advantage provided by the asymmetric disclosure of information often declines as prices approach the equilibrium, but the pricing advantage can persist when a wide range of equilibrium prices exists.

Support: Figures 9 and 10 indicate that the price differences between Buyers-Informed and Sellers-Informed sessions are generally more pronounced in the early periods than in the later periods. For example, consider the size of the percentage price difference across these two opposite cases for the first 3 paying periods (periods 2 through 4) compared to the next 3 paying periods (periods 5 through 7). In Design A (i.e., narrow range of equilibrium prices), the differences in prices across treatments are modestly greater in periods 2 through 4 (averaging 8.1 percent) compared to periods 5 through 7 (averaging 6.7 percent). But in Design B (i.e., wider range of equilibrium prices), in periods 2 through 4 the prices are on average 10.1 percent higher when sellers are informed (544) than when buyers are informed (494), while in periods 5 through

7 the prices on average are only 5.3 percent higher when sellers are informed (558) than when buyers are informed (530).

Nevertheless, an independent examination of the longer Design B sessions 040215a and 040215c indicate that the pricing advantage can persist even after prices have converged to equilibrium, as long as that equilibrium contains a relatively wide range of prices. In the late periods 8 through 10, the average transaction price in the Sellers-Informed session 040215c is 9 percent higher (581) than in the Buyers-Informed session 040215a (532). Note that both of these averages are, however, still within the range of equilibrium prices [475, 600].

Result 4:

The response of realized transaction prices to changes in equilibrium market conditions depends on the information available to traders about the new supply and demand situation. (i) Design D sessions show that when both types of traders can recognize an underlying shift, prices adjust toward the midpoint of the new equilibrium price range; (ii) Design E sessions show that prices do not adjust to reflect cost reductions when only sellers are aware of the underlying change in market conditions.

Support: Figures 11 and 12 present median transaction prices for the 6 sessions in Designs D and E. Sellers were informed of the minimum buyer values in all 6 of these sessions. In Design D a narrow market equilibrium price range in early periods is followed by a large demand and supply shift in period 7 to a condition that results in both inelastic demand and inelastic supply and a wide range of equilibrium prices. After the shift, however, prices that were very near the old equilibrium price remain as possible new equilibrium prices. Thus, since we observe prices in the equilibrium range—as documented throughout these results—a possibility exists that prices would move very little or by a substantial amount (up to 50 percent) after the shift is introduced in period 7.

Despite the possibility that prices need not adjust by much in order to reach a new equilibrium level, however, prices in fact adjust quickly and significantly to near the middle of the new equilibrium price range. What is perhaps more surprising is that the shift is similar in speed and size when the equilibrium shifts down compared to when it shifts up, even though in all four sessions sellers know the buyers' values while buyers never know the sellers' costs. Buyers can infer that market conditions are changing in period 7, though, because of their own dramatically revised resale values. This may have motivated them to negotiate aggressively with sellers following the shift, leading to substantial downward price pressure when the equilibrium price range shifted all the way down to 280 francs. This conjecture motivated the more subtle supply and demand shifts introduced in Design E.

In Design E, sellers' costs shifted down in period 6 resulting in a downward widening of the competitive equilibrium price interval. Buyers' values remained unchanged and they received no information about sellers' costs, so they should have been unaware of the supply shift. Although prices could have fallen by as much as 20 percent following this shift and still remain in the equilibrium range, Figure 12 shows that median prices hardly adjust (remaining mostly around 700 francs) in both sessions. By contrast, median prices increase immediately in both sessions when a demand shift that is known to the informed sellers is introduced in period 10, and prices continue to rise thereafter. This suggests that when sellers are asymmetrically informed about buyer values the transaction prices are more sensitive to demand shifts than they are to supply shifts.

Result 5:

All results stated above survive the robustness tests of Series C.

Support: Series C consists of two sessions operating under the same parameters. The time series of median transaction prices are displayed in Figure 13. In these sessions, the first two

periods have stationary, symmetric demand and supply with consumer surplus equal to producer surplus. Prices converge to near the competitive equilibrium by period 2, consistent with Result 1. In period 3, a demand and supply shift takes place that is not announced to any traders. As can be seen prices move up, possibly reflecting the asymmetric rents, with consumer surplus greater than producer surplus and the market in the early part of adjustment feeling the changes with a consequent shift upward in price. In period 4, another upward demand shift takes place that exacerbates this rent asymmetry but does not affect the equilibrium price range. The information of the shift is not given to the sellers and there is no tendency for prices to move upward, consistent with Result 2 that the information disclosure is a key feature that conveys advantages to the information receiving side. In Period 5, another upward shift in demand takes place, this time widening the equilibrium price range. At the beginning of the period the demand is disclosed to the sellers, and consistent with Result 2 the prices immediately jump in one market and move sharply upward in the other market two periods later. In period 8, another upward demand shift takes place without demand disclosure. This shift in demand has no effect on market prices in session 040216a and a small effect in session 040216b, but since the 040216b market had an upward drift in prices anyway attribution to the demand shift is problematic. In period 9, when the demand is disclosed and sellers learn of the shift the market prices immediately respond upward in session 040216a, and median prices respond upward with a one period lag in session 040216b. The phenomena identified in all of the previous results are also found in this more complex setting thereby demonstrating that the results are robust to such environmental changes.

produced here place a burden on the advocates to produce a theory of sufficient generality to support the proposition that they advance. When that is done additional tests can be performed to test its reliability.

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Figure 1: Example *Marketscape* Trading Screen

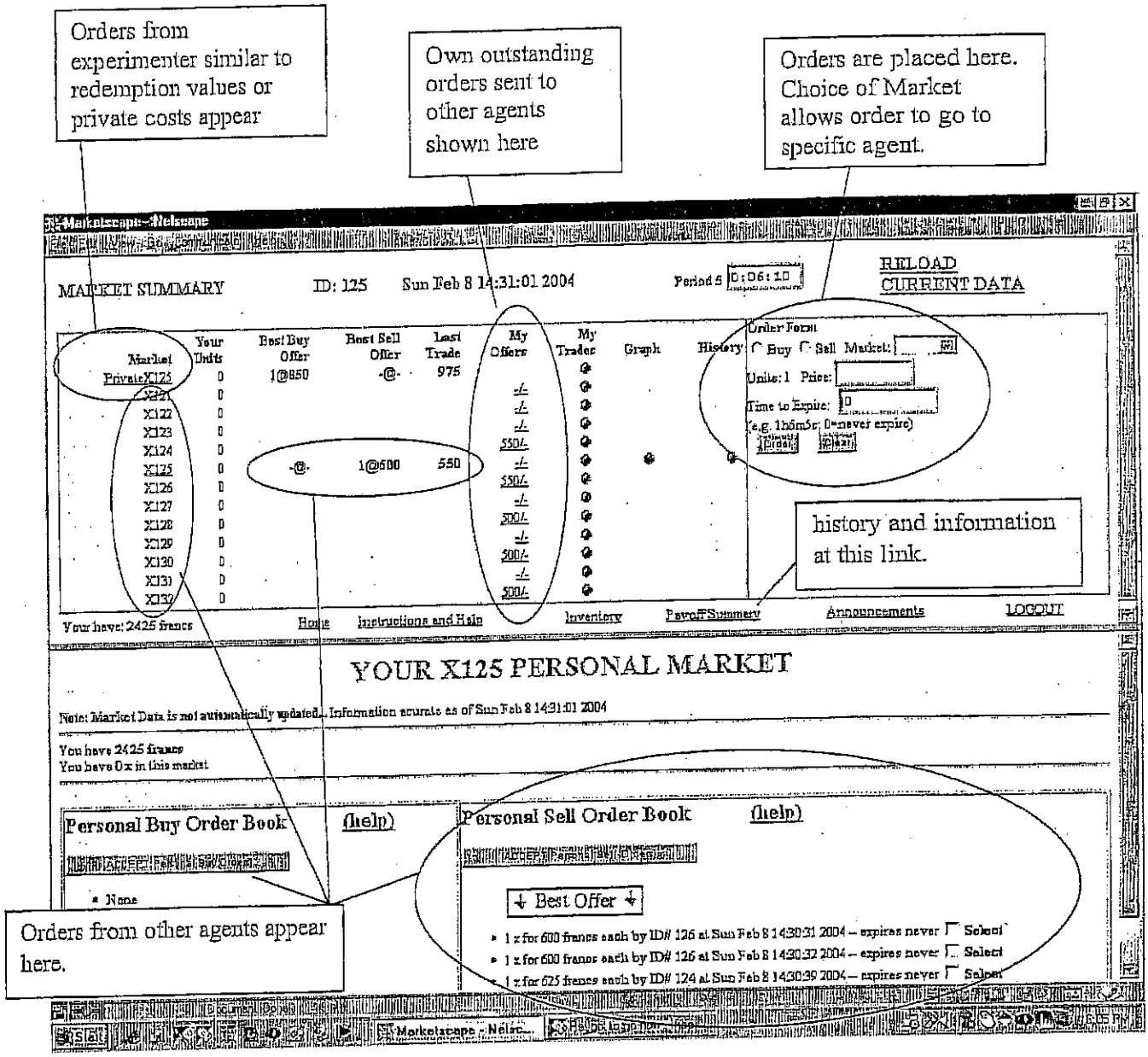


Figure 2: Supply and Demand for Design A

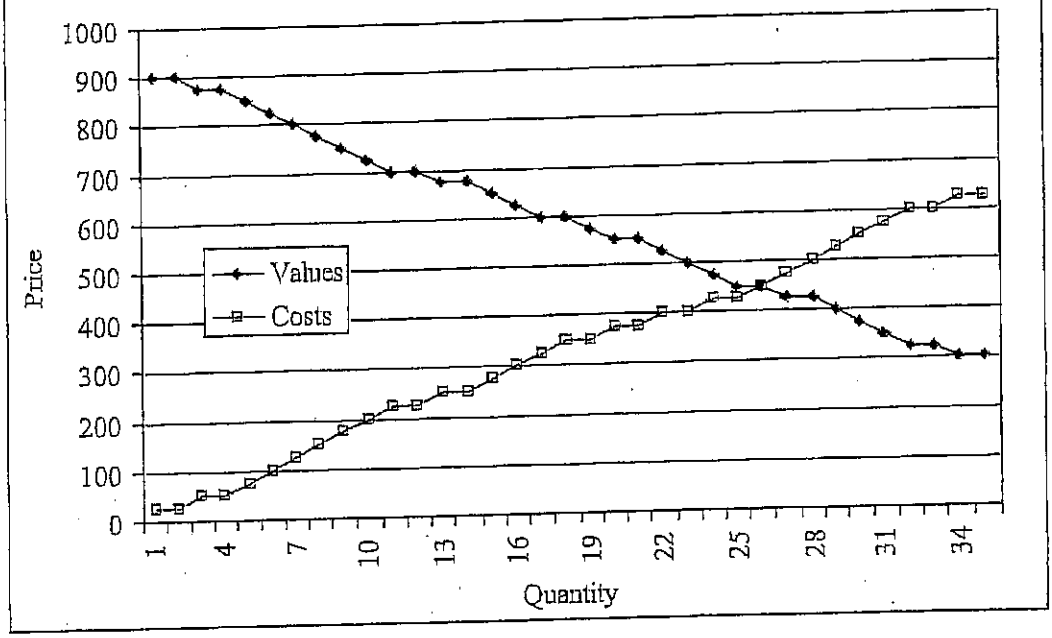


Figure 3: Supply and Demand for Design B

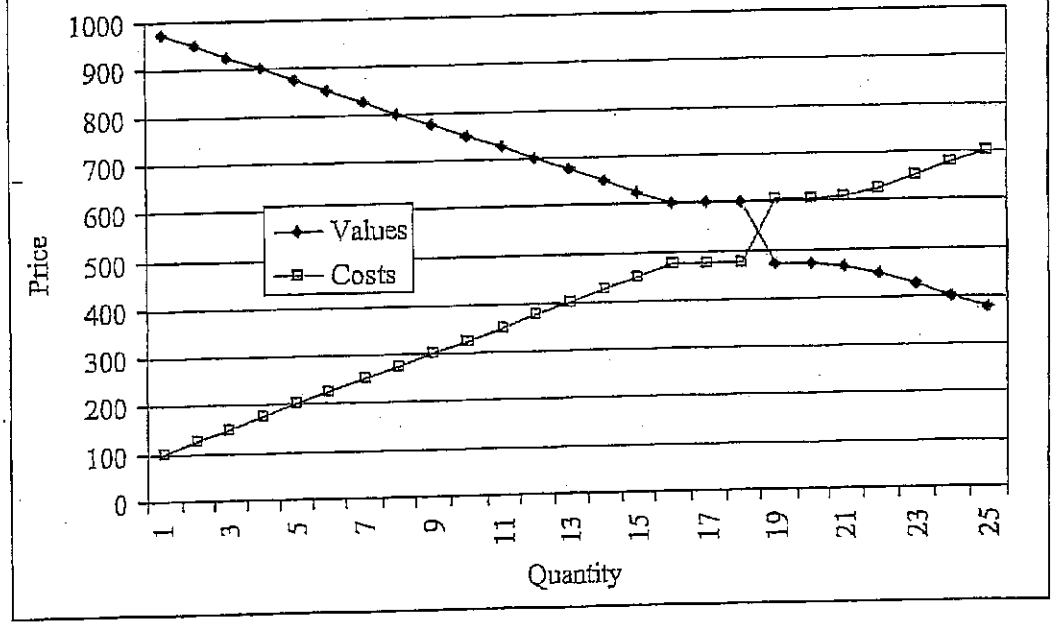


Figure 4: Supply and Demand for Design C

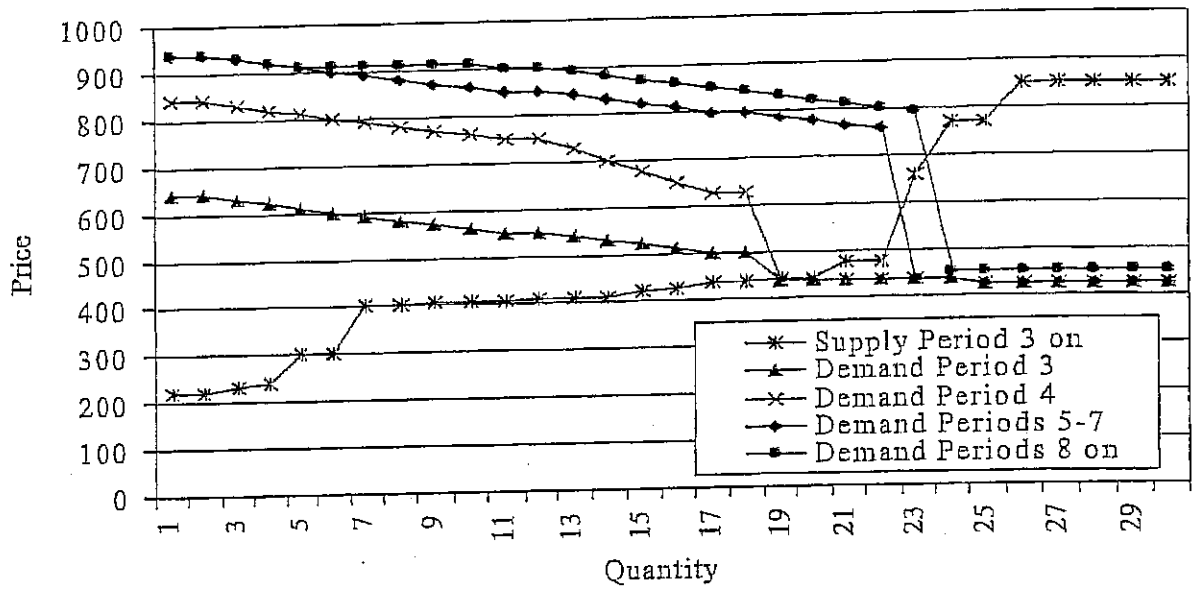
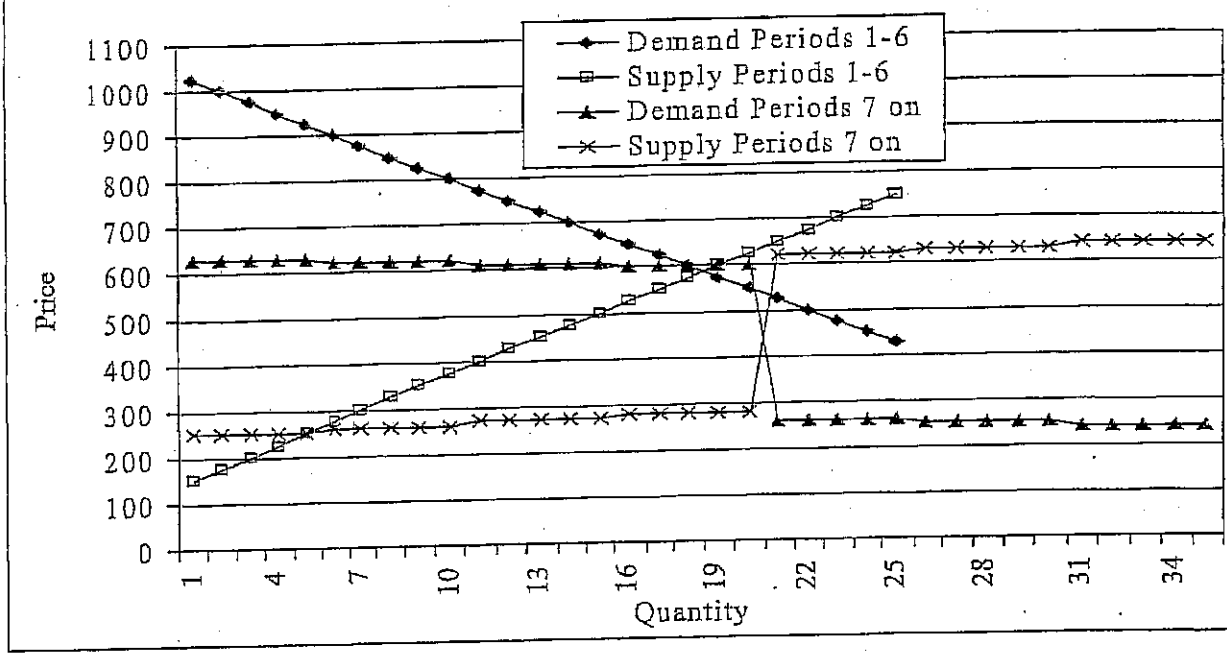


Figure 5: Supply and Demand for Design D



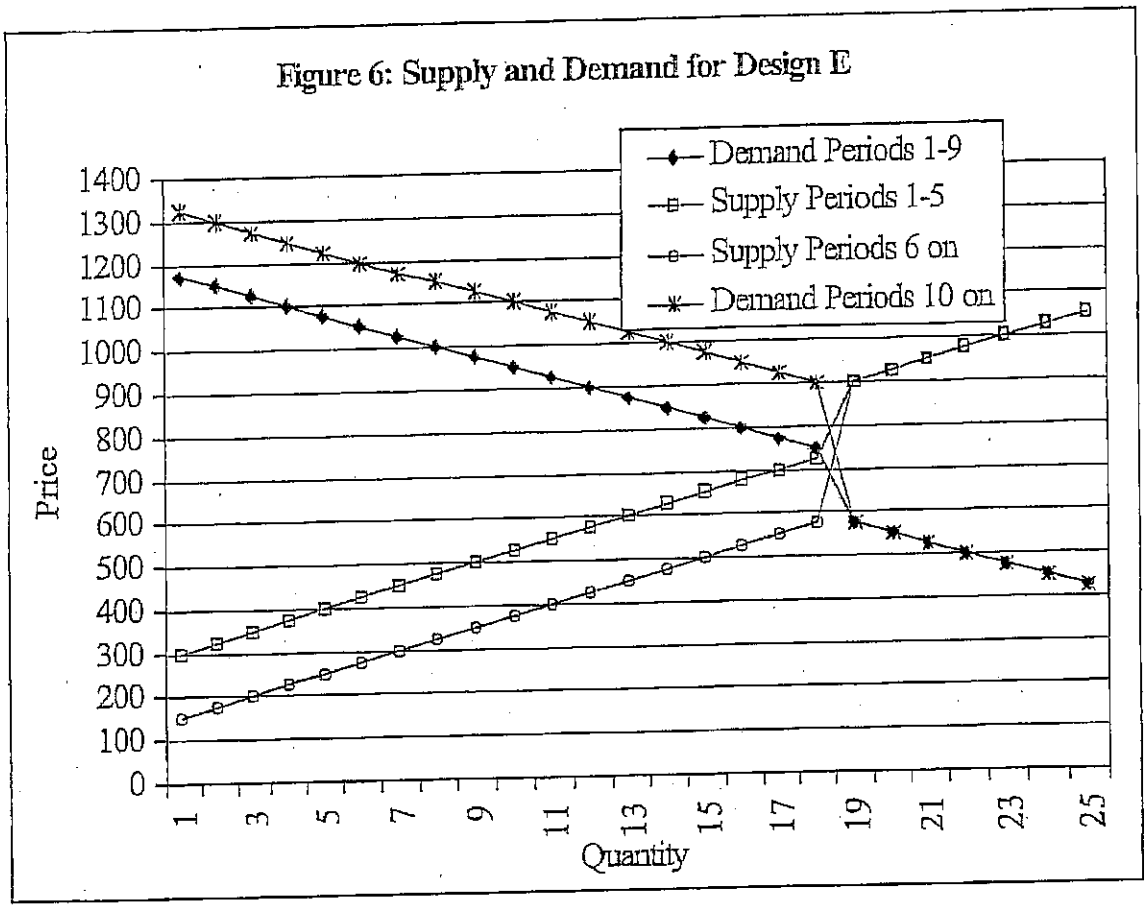


Figure 6: Supply and Demand for Design E
Demand Periods 1-9
Supply Periods 1-5
Supply Periods 6 on
Demand Periods 10 on
Price
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
1
3
5
7
9
11
13
15
17
19
21
23
25
Quantity

Figure 8: Price Dispersion, by Session (Standard Error of the Mean Transaction Price)

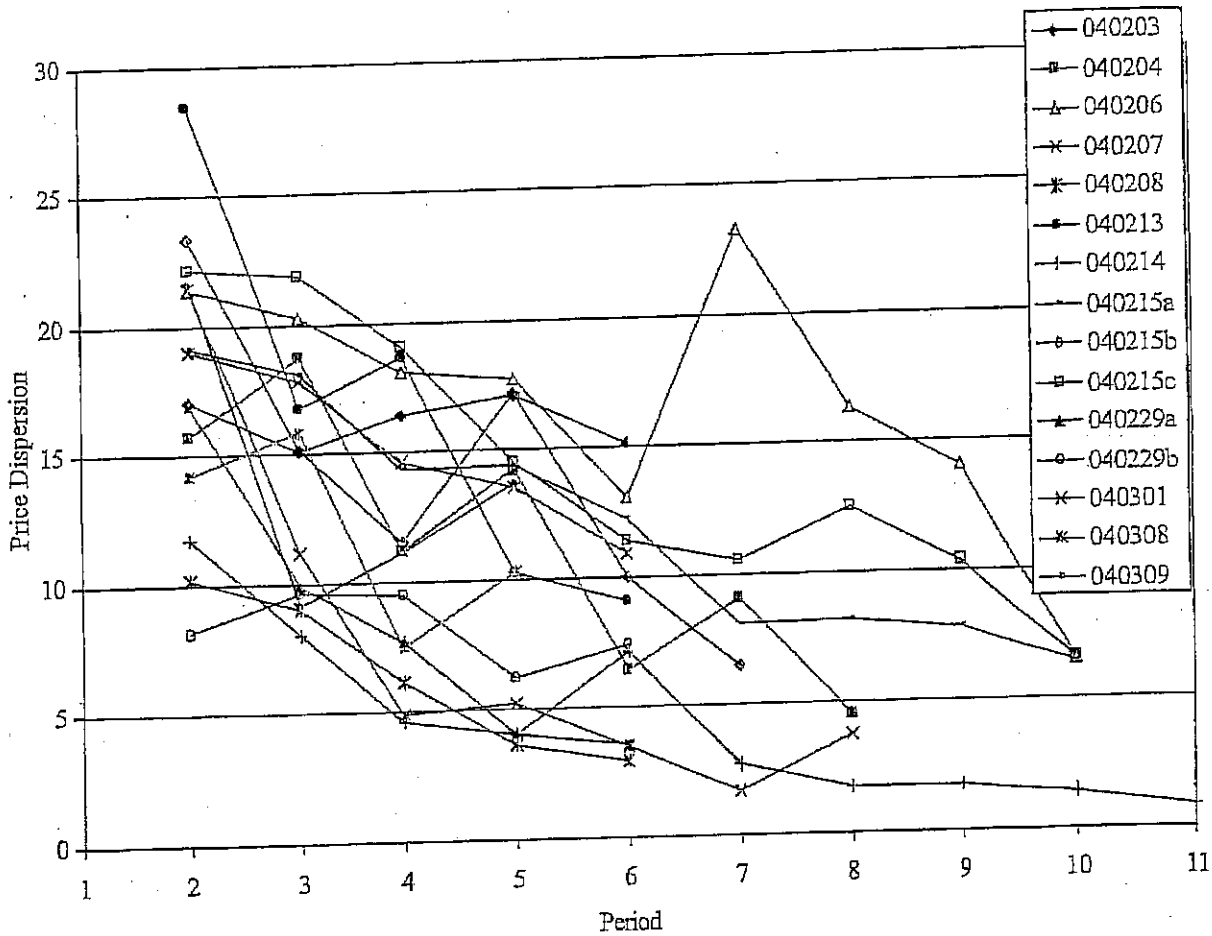
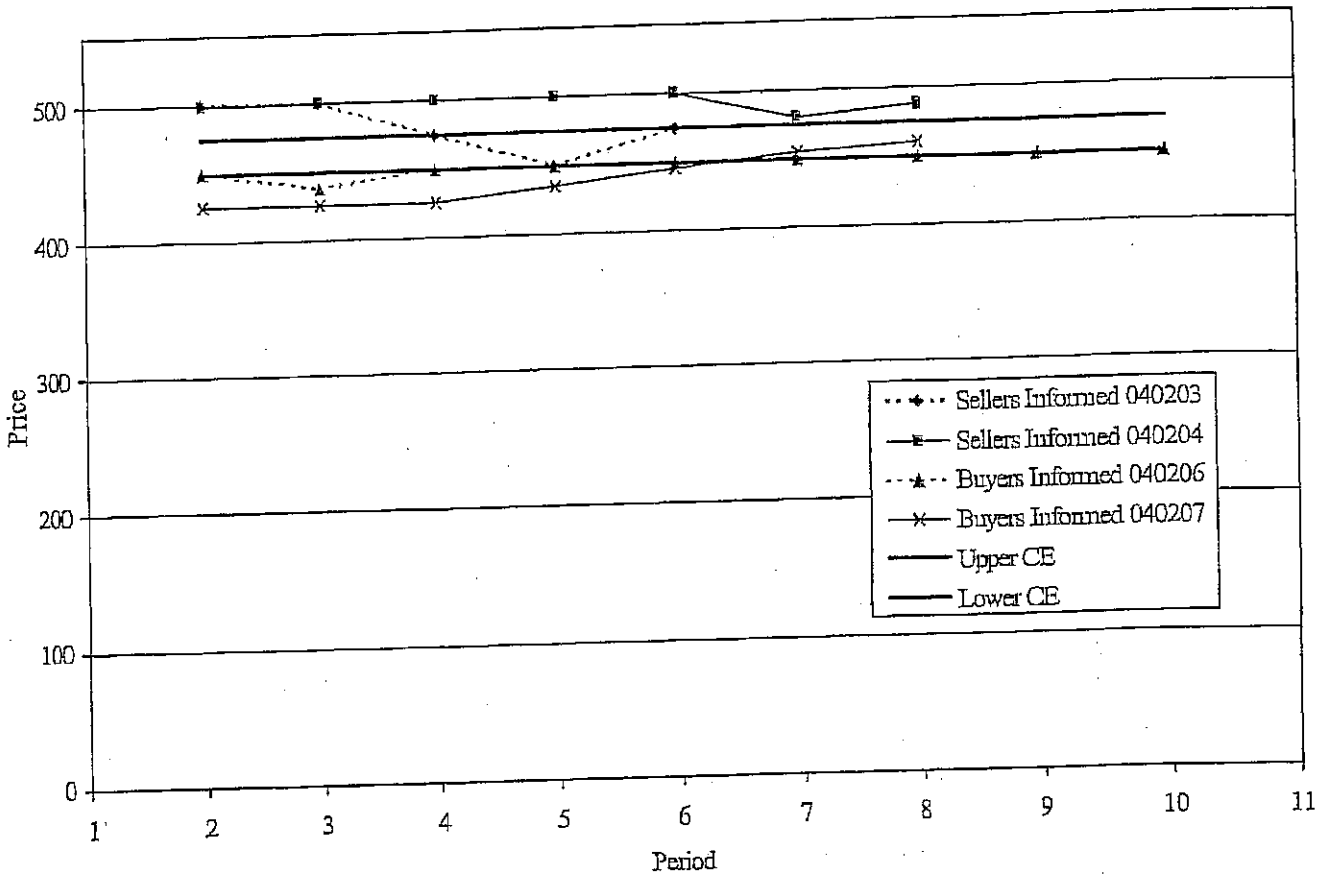


Figure 9: Median Transaction Prices by Session, Design A



Note: Upper CE of 475 only applies to session 040207. Other sessions have a unique CE of 450.

Figure 10: Median Transaction Prices by Session, Design B

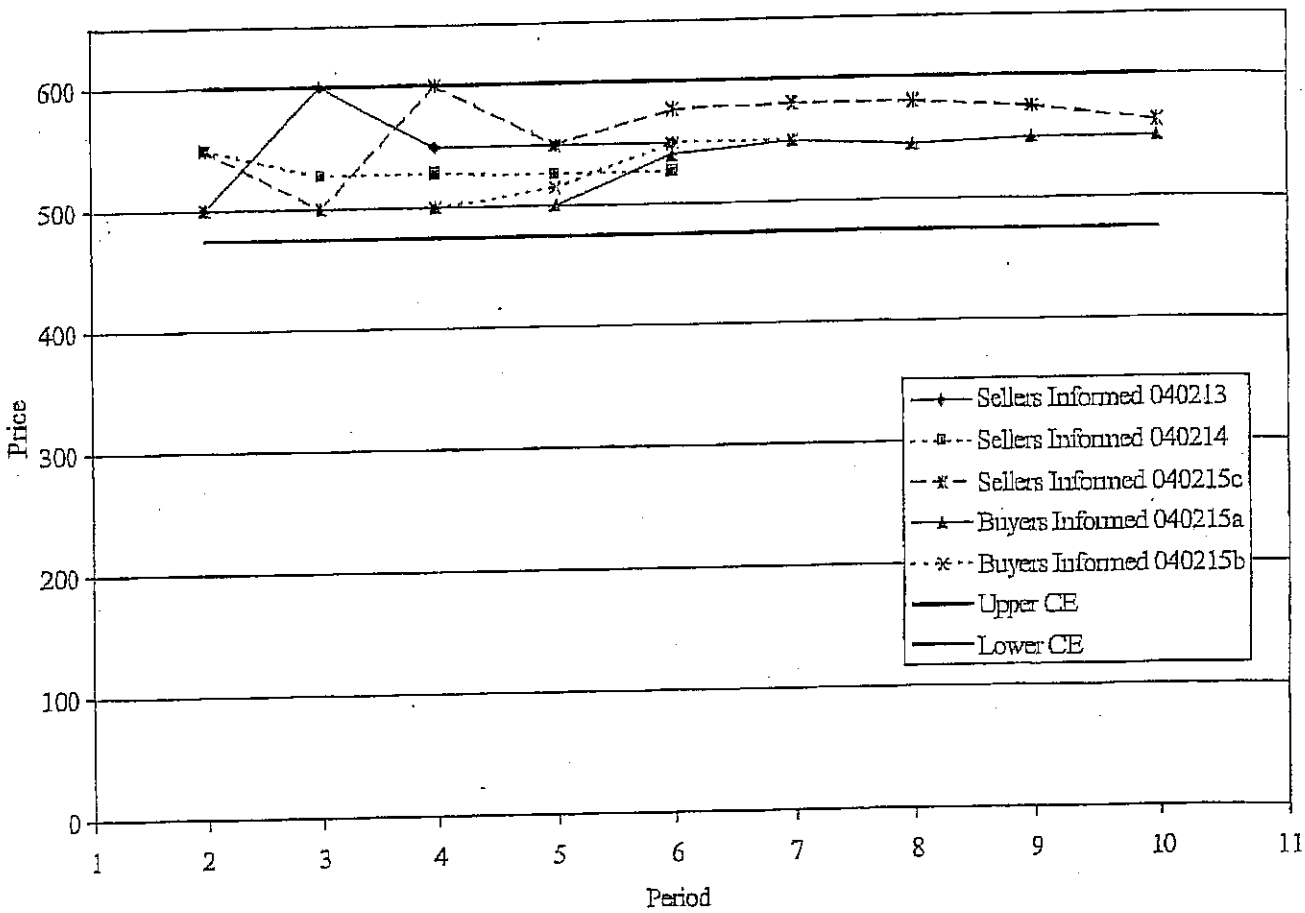


Figure 11: Median Transaction Prices by Session, Design D

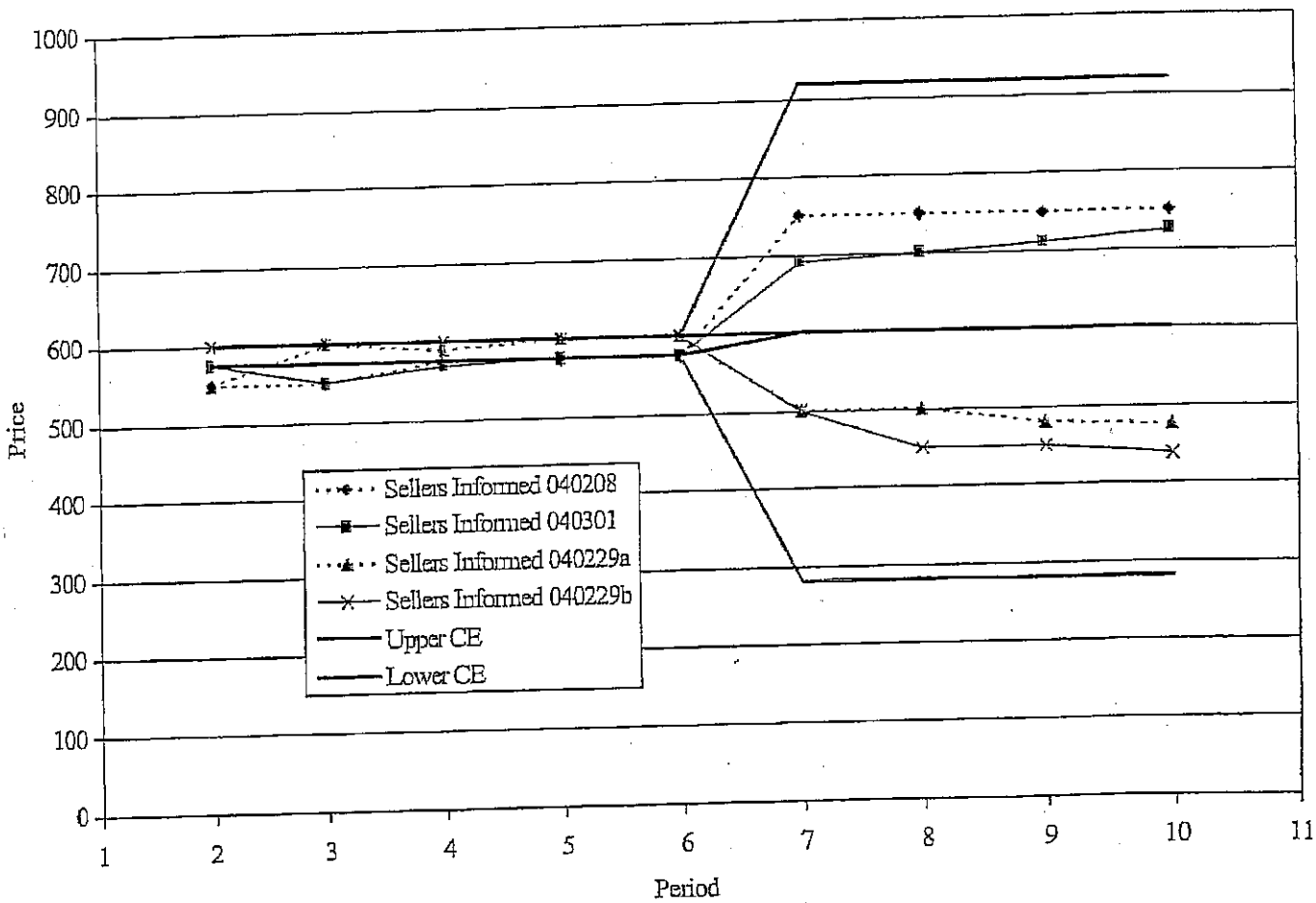


Figure 12: Median Transaction Prices by Session, Design E

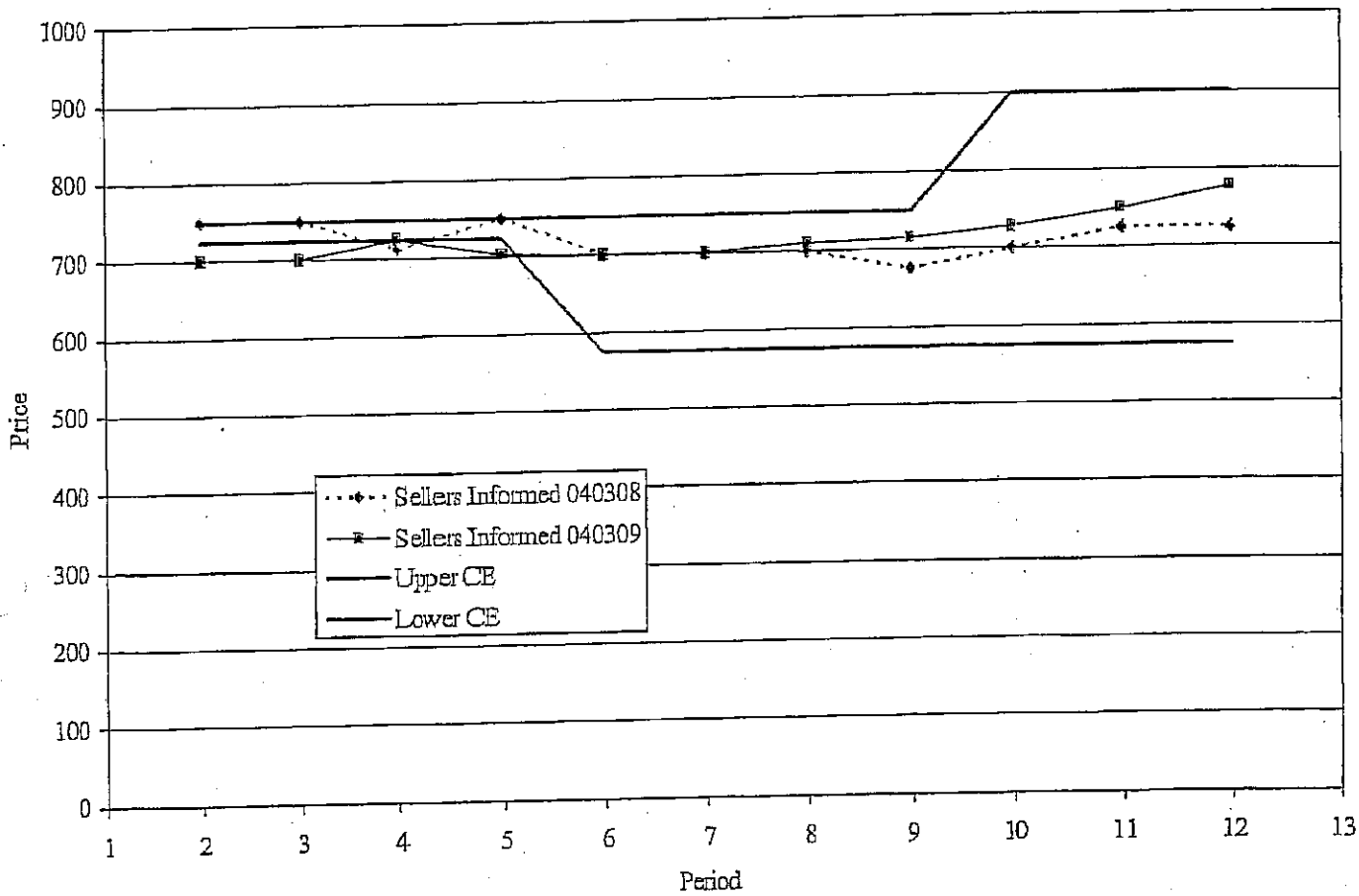


Figure 13: Median Transaction Prices by Session, Design C

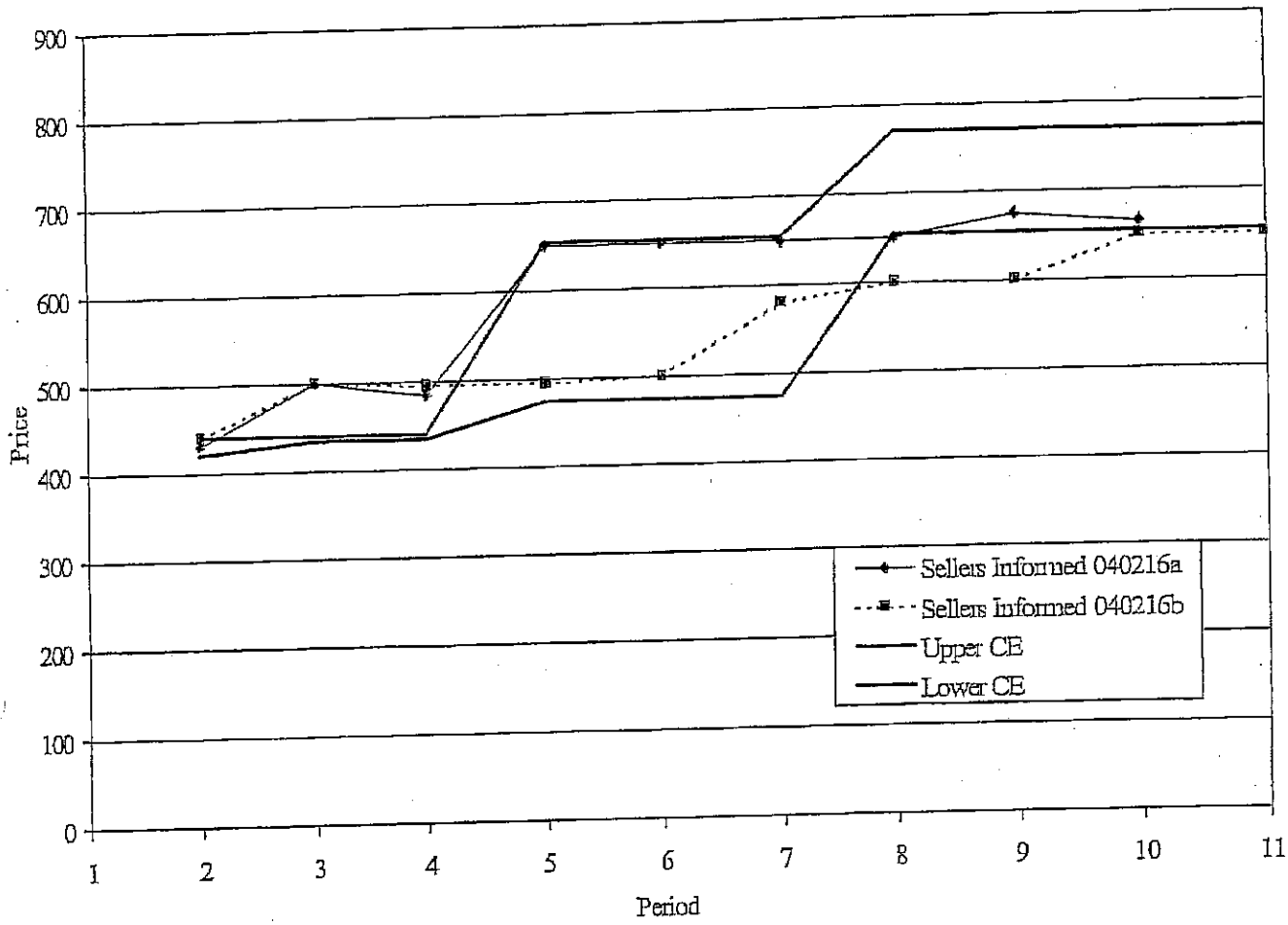


Table 1: Experimental Sessions

Index	Location	Market Parameters	Disclosure Condition
040203	CIT	Design A	buyer values known to sellers
040204	CIT	Design A	buyer values known to sellers
040206	CIT	Design A	seller cost known to buyers
040207	CIT	Design A	seller cost known to buyers
040208	CIT	Design D, upward shift in equilibrium in period 7	buyer values known to sellers
040213	Purdue	Design B Set 2	buyer values known to sellers
040214	CIT	Design B Set 3	buyer values known to sellers
040215a	Purdue	Design B	seller cost known to buyers
040215b	CIT	Design B	seller cost known to buyers
040215c	Purdue	Design B	buyer values known to sellers
040216a	CIT	Design C set 4b Schedule 3 demand shifts 3,4,5,8	buyer values known to sellers periods 5, 9
040216b	Purdue	Design C set 4b Schedule 3 demand shifts 3,4,5,8	buyer values known to sellers periods 5, 9
040229a	Purdue	Design D, downward shift in equilibrium in period 7	buyer values known to sellers
040229b	CIT	Design D, downward shift in equilibrium in period 7	buyer values known to sellers
040301	Purdue	Design D, upward shift in equilibrium in period 7	buyer values known to sellers
040308	Purdue	Design E, supply shift per. 6, demand shift per. 10	buyer values known to sellers
040309	Purdue	Design E, supply shift per. 6, demand shift per. 10	buyer values known to sellers

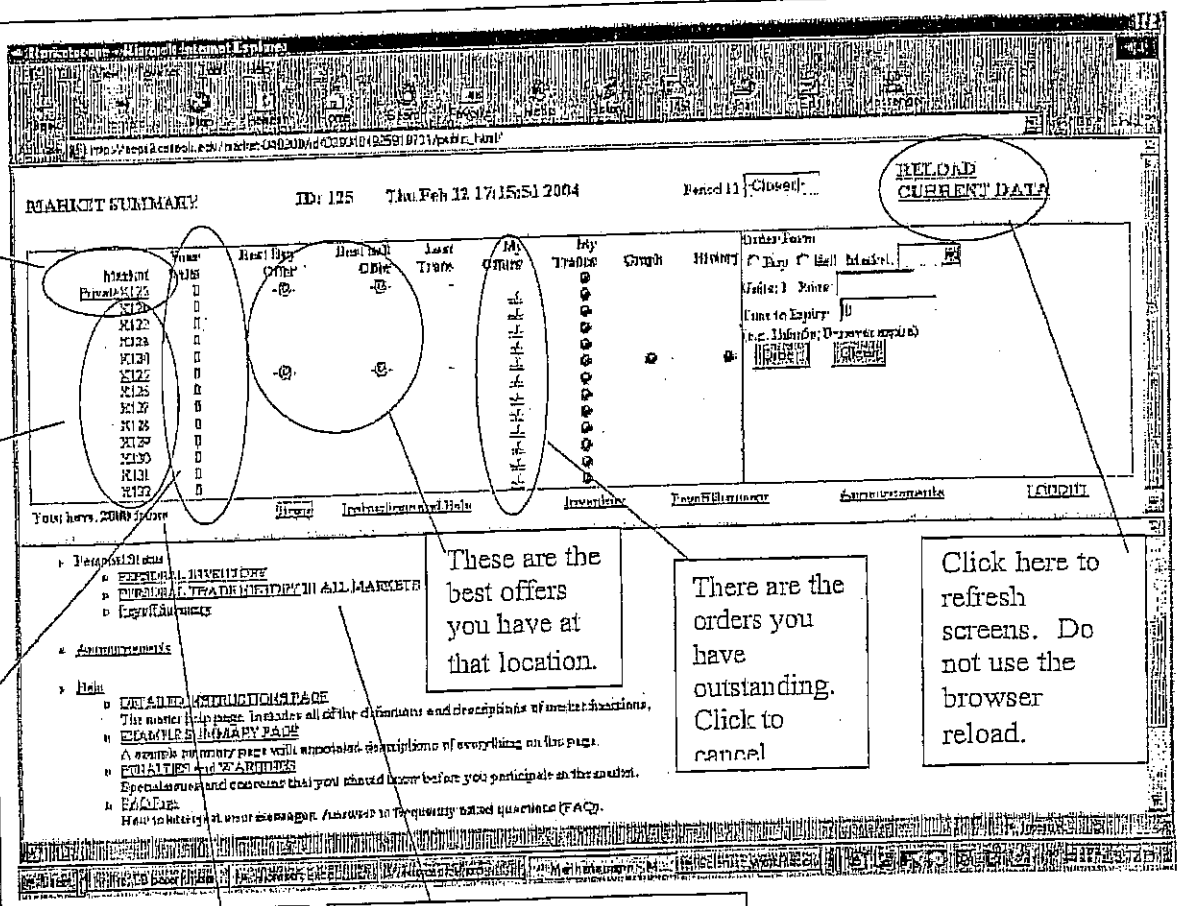
Table 2: Deviations of Median Transaction Prices from Competitive Equilibrium

Session Index	Period 2 Median-CE	Period 5 Median-CE	Difference in Absolute Deviations (Period 2 - Period 5)
Design A			
040203	50	0	50
040204	49	50	-1
040206	0	0	0
040207	-25	-15	10
Design B			
040213	0	0	0
040214	0	0	0
040215c	0	0	0
040215a	0	0	0
040215b	0	0	0
Design D			
040208	-25	0	25
040301	0	0	0
040229a	-25	0	25
040229b	0	0	0
Design E			
040308	0	0	0
040309	-25	-22.5	2.5

Appendix A: Experiment Instructions for Specific Multilateral Negotiation Rules in *Marketscape*

The word buyer or seller reflects how you are seen by others. Odd numbers are buyers and even numbers are sellers. Buyers buy units from others (thus are viewed as a buyer by others) and then sell to the experimenter for profit. Sellers sell units to others (thus are viewed as a seller by others) after they have bought them from the experimenter. There are two types of markets. In your **private market**, you accept deals offered by the experimenter. Buyers will sell to the experimenter the units they bought from others and sellers will buy from the experimenter the units that they plan to sell to others.

In your **personal market**, you will receive offers from others just as you will place offers in their personal markets.



- Watch the time.
- If you are a buyer, you will be placing orders in the EVEN personal markets (the odd are other buyers and like you are buying from the experimenter in a private market).
- If you are a seller, you will be placing orders in the ODD personal markets (the evens are other sellers and like you will be buying units from the experimenter in a private market).
- All offers are for 1 unit.

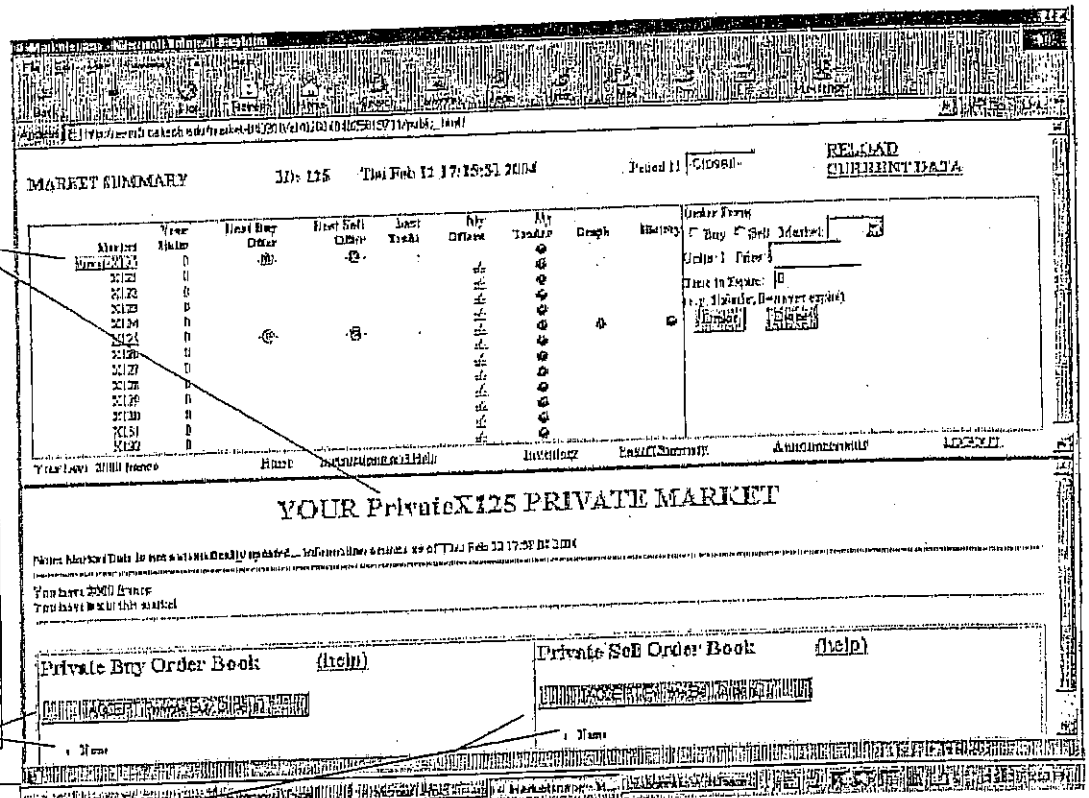
Click on your private market and you will see orders placed by the experimenter.

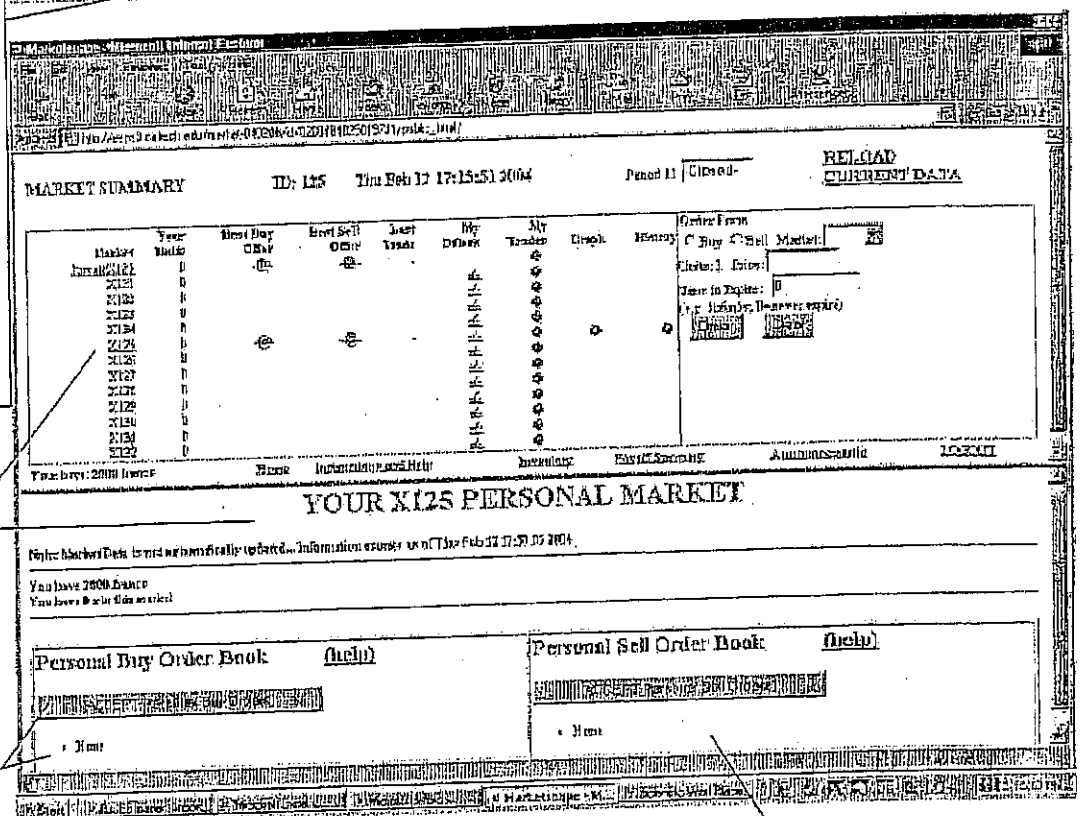
If you are a **buyer** you will be buying from others and reselling to the experimenter. You sell to the experimenter by accepting buy orders placed here.
Click on the order you want to accept and then click accept.

If you are a **seller** you will be selling to others the units that you buy from the experimenter by accepting sell orders that the experimenter places here.
Click on the order you want to accept and then click on accept.

Offers sent to you by others will be displayed here.

If you are a **seller** others will send you buy orders. They will appear here. Just click on the one you want and the click on accept.





If you are a **buyer** others will send you Sell orders that will appear here. Just click on the ones that you want and then click on accept.

Payoff Summary Link: Extra Information

This link provides a summary of your past earnings and payoffs. It also contains special information for the sellers (even numbers).

Sellers will have information about the minimum values that buyers (odd numbers) have for units. At the payoff summary link the sellers (even numbers) will find the following table.

BUYER NUMBER	Value of unit to buyer				
	1st unit	2nd unit	...	...	nth unit
X121	•	•	...	...	•
X123	•	•	...	...	•
X125	•	•	...	...	•
X127	•	•	...	...	•
X129	•	•	...	...	•

These numbers are a floor of the values that the buyers have in their private order book – the value for which they can resell the unit to the experimenter are at least this high. In some cases these values might be the exact numbers and in other cases these values might be lower than the exact values.

Exhibit B

Figure 1. The Important Features of the Demand for Electricity

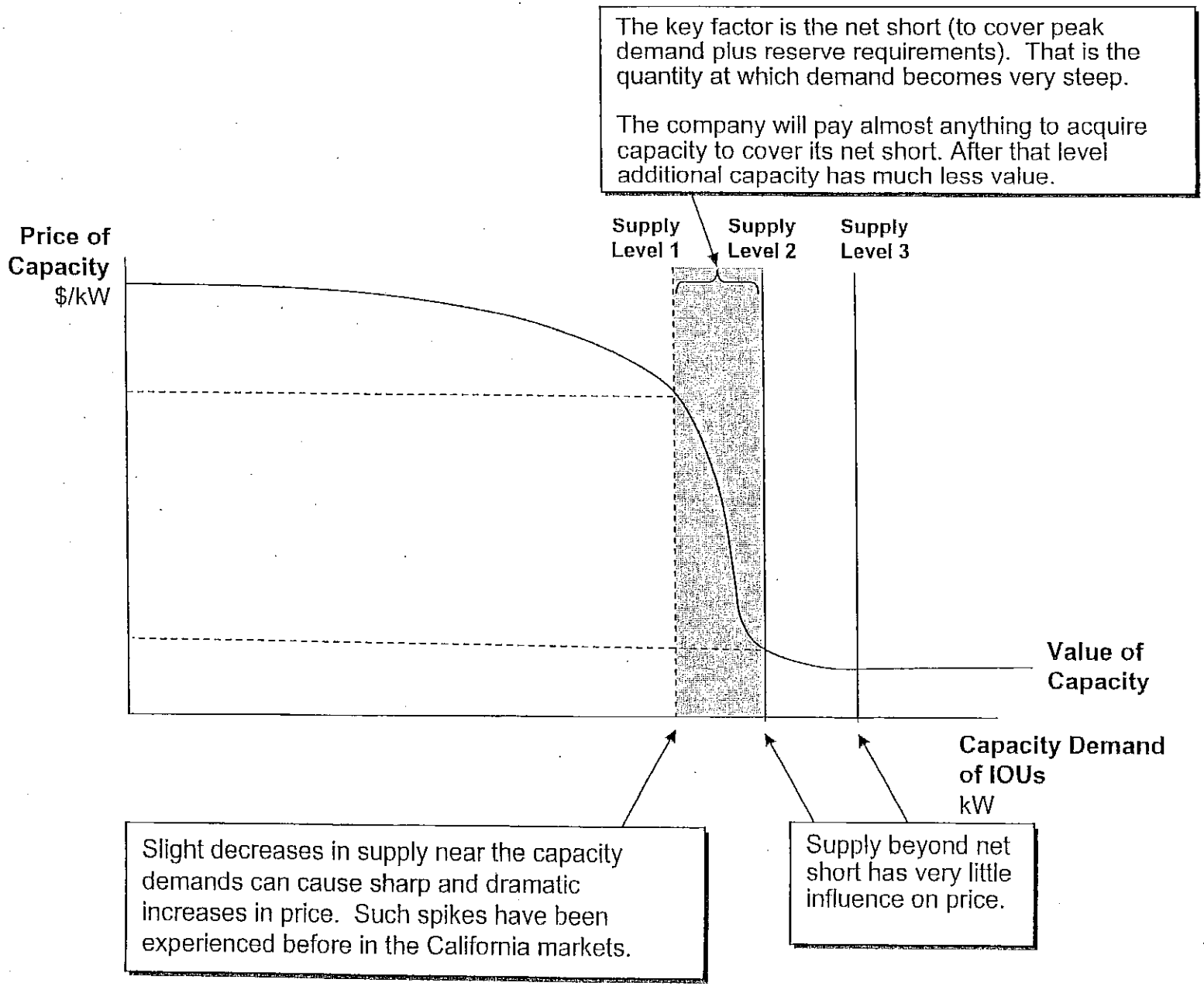
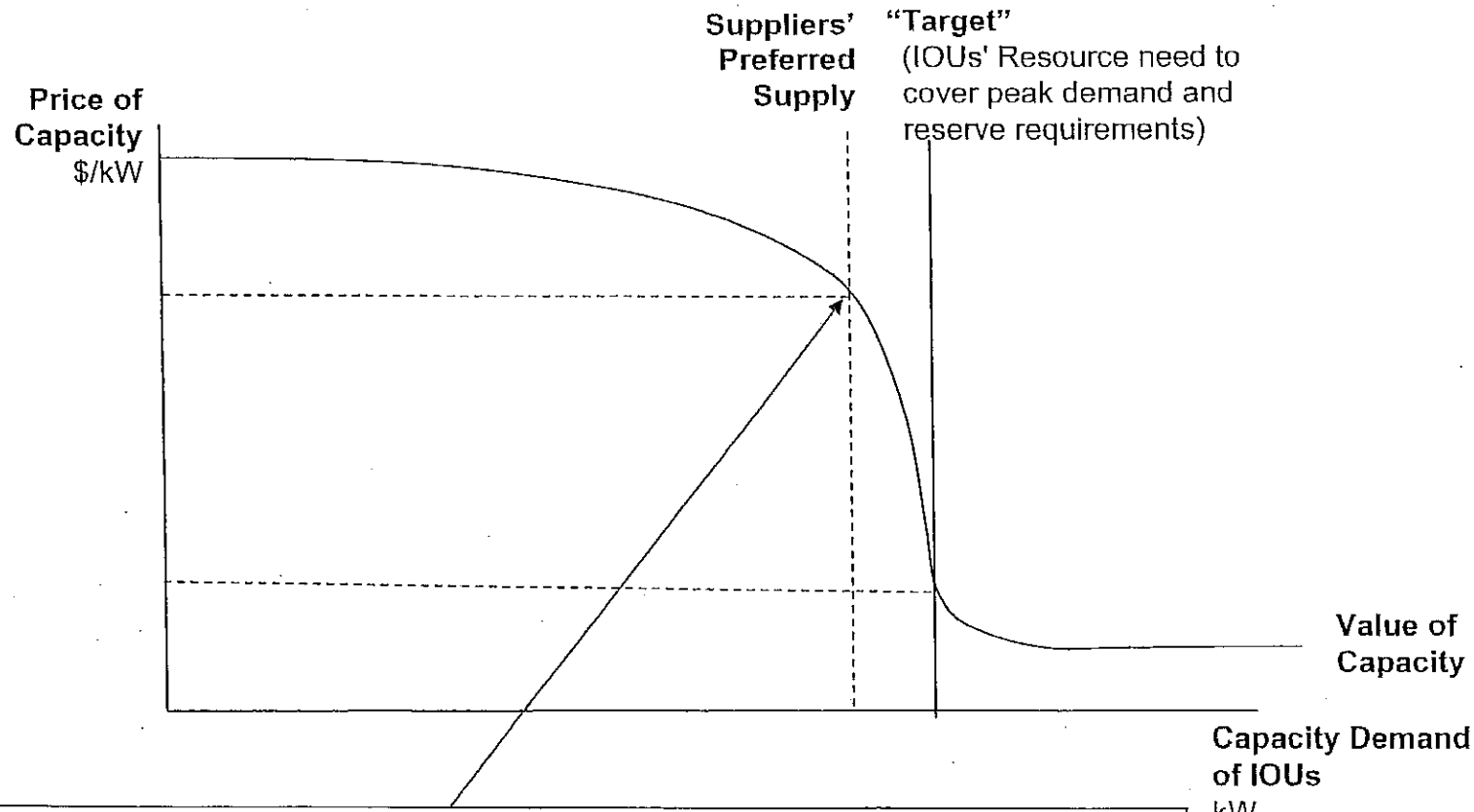


Exhibit C

Figure 2. Knowledge of Demand Curve and Coordinated Strategies Combine to Create Upward Pressures on Prices in the Marketplace



By knowing net short of the IOUs, each supplier has an incentive to hold back supply a little in the expectation of pushing up the price. The net effect is a reduced slightly less than what the IOUs need and this scarce supply relative to IOUs' need pushes prices up sharply:

- If supplies are short then the maximum amount that the company will pay is known to be high. Prices are kept low by the expectation that competitive suppliers will supply the company needs.
- If such sources of competitive supply are reduced below this target level then all suppliers will benefit from higher prices paid by the company.
- That knowledge creates an incentive for each to hold back a little with the collective result of higher prices.

Appendix 4

DECLARATION OF KEVIN R. CINI

I, Kevin R. Cini, declare:

1. I am Director of Energy Supply and Management of Petitioner Southern California Edison (SCE) and, as such oversee a department of approximately 90 SCE employees. I have primary responsibility within SCE for all issues concerning SCE's power purchases from conventional (non-renewable, non-Qualifying Facility) sources, including contractual, regulatory and litigation matters that arise in connection with such purchases. As part of my job duties it is my responsibility to remain current on proceedings before and decisions issued by the California Energy Commission ("Commission") the California Public Utilities Commission ("CPUC"), the Federal Energy Regulatory Commission ("FERC") and the courts dealing with electric power issues generally. I have a Bachelor's degree in Chemistry and a Master's degree in Business Administration from the University of California, Irvine. I have been employed by SCE in progressively more responsible positions since 1981. I have personal knowledge of the matters set forth herein, and I could testify competently thereto if called as a witness.

2. I am making this declaration to explain how a recent Notice of Intent to Release Aggregated Data, issued by the Commission's Acting Executive Director on June 3, 2005 ("Notice of Intent"), and attached to SCE's Petition for Writ of Administrative Mandate as Exhibit C, makes the release of the information that was the subject of the Commission's May 11 Decision even more damaging to SCE. This Notice of Intent is relevant to these proceedings, but was not available at the time SCE's appeal to the full Commission was filed and thus could not have been produced by SCE.

3. As noted in the Writ Petition, SCE has both "bundled customers" and "direct access customers." Bundled service customers are those for whom SCE

provides all electric services. For these customers, SCE provides not only the transmission and distribution lines and services that bring power to their homes and businesses, but the actual electric power supply that is transmitted over those lines. This power can be supplied from SCE's own plants, or via contracts SCE negotiates and enters with other power producers. The great majority of SCE's residential and small business customers are bundled service customers.

4. The second category of customers is "direct access customers." While SCE provides transmission and distribution lines and services to these customers, SCE is not responsible for procuring the power supply that is transmitted over the lines and that the customers use. Their power is supplied by independent Energy Service Providers, or "ESPs." Direct access customers contract with ESPs to provide them with their power supply, which is transmitted across SCE's lines. Direct access customers are primarily, but not exclusively, large businesses.

5. SCE's "total system" thus consists of both bundled service customers and direct access customers. (In other contexts, SCE's total system is defined to include wholesale transmission services that SCE provides, although the definition provided in the sentence above is most relevant for the purposes of this declaration.)

6. In essence, the difference between the amount of power SCE needs to provide its bundled service customers and the amount it actually possesses (owned or procured by SCE already) is called the "residual net short" or "net short." The "net short" that SCE needs to procure to serve the bundled customer load at peak, regardless of the time of that peak, is the primary subject of this declaration, and is sometimes referred to the "capacity net short." Since electrical power cannot stored, SCE has no choice but to obtain the minimum required amount of electrical capacity to reliably supply power to its bundled customer load at peak, or to create an unacceptable risk of having to interrupt service.

7. In other contexts, "net short" can refer to the amount of electrical capacity that SCE needs to procure to meet the monthly peak need, or can refer to the amount of electrical energy that SCE seeks to procure for a daily, monthly or quarterly block of hours, such as the industry-defined "on-peak" hours or "off-peak" hours (or all hours of the block – the so-called "flat" product).

8. In contrast, "net long" refers to the electrical energy that SCE seeks to sell in the market, typically for a daily, monthly, or quarterly block of hours. In any case, the "net short" or "net long" position is market sensitive information because it conveys the quantity and product that SCE must procure or is seeking to sell into the market.

9. SCE is also subject to decisions of the California Public Utilities Commission that require SCE to procure minimum levels of electrical capacity to serve its bundled customer load at the annual peak and at each month's peak, regardless of the actual time of occurrence of these peaks. This minimum level is expressed as a fixed percentage (that is publicly known) of the bundled load forecast, not as an absolute number. Since the annual and monthly peak bundled load forecasts are the bases of SCE's required procurement, SCE has maintained this information as confidential.

10. In the latter part of 1996, California enacted Assembly Bill 1890 ("AB 1890"), which began the now well-publicized, failed deregulation of the California wholesale electricity market. Prior to deregulation, SCE served its retail electric customers using a generation mix from its owned generation, through contracts (predominantly long-term) between SCE and other utilities, and through long-term contracts with Qualifying Facilities (QFs). Because the power needed to serve SCE's customers came from its own generation, or was under contract, SCE's "net short" position was zero (or negative, meaning SCE had a surplus of electrical capacity above the minimum).

11. Following deregulation, various CPUC orders compelled SCE to sell all of its natural gas-fired generating units to independent third parties. The concept behind deregulation was that the transfer of utility-owned generation to independent third parties, along with the development of new generating facilities by such parties, in concert with a competitive wholesale electricity market and end-use customers' "direct access" to non-utility generation would reduce costs for electric consumers over time. The state established a spot market, known as the Power Exchange ("PX"), in which the wholesale price of electricity was to be set on an hourly basis through competitive bidding. The PX commenced daily trading on March 31, 1998.

12. The deregulated wholesale market for electricity in California did not develop as anticipated. For awhile, the deregulation scheme produced reasonable wholesale electric prices which were compatible with SCE's frozen retail rates. Beginning in about mid-2000, however, a combination of factors caused wholesale electric rates to skyrocket in California. Among other things, structural infirmities in the California and regional wholesale markets permitted rampant market manipulation by independent generators and power marketing companies. As a consequence of the market dysfunctionality described above, the PX suspended active trading on January 19, 2001.

13. For the next two years, the Department of Water Resources (DWR) procured power to meet the needs of SCE's bundled service customers, as well as customers of the other investor-owned utilities. Beginning January 1, 2003, DWR was no longer authorized to procure power for the customers of investor-owned utilities. On or slightly before that date, SCE started procuring power from the market. Nevertheless, since SCE sold many of its plants, its "net short" requirement was significant.

14. If a market participant or market participants became aware of the magnitude of SCE's "short" position for any particular period, that market

participant or all market participants collectively could and would charge or bid a higher price than otherwise to sell power to SCE. Market participants would realize the "shorter" SCE's position (i.e., the greater the quantity of power SCE needs to buy), the more pricing power and leverage they could exercise over SCE. Similarly, data enabling an energy supplier to determine SCE's net long position would allow the supplier to know the quantity of power SCE is seeking to sell. Advance knowledge of SCE's "short" or "long" positions allows market participants the opportunity to accumulate positions in advance of SCE's transaction activity, enabling them to exercise even greater pricing leverage over SCE.

15. I have reviewed the Decision attached as Exhibit A to the Writ Petition. It would allow the Commission to make public SCE's forecast of the Bundled Customer Peak and Direct Access Peak. If power producers knew this peak annual number, and also were able to determine from other sources how much power SCE already secured, those generators could determine SCE's net short, i.e., how much power SCE needed to buy. This information would give prospective suppliers a significant advantage in negotiations for supplies of power. Much of SCE's existing supply information, however, is already in the public domain. Although the supply information may take homework on the part of a market participant to obtain, fairly comprehensive information could nevertheless be obtained.

16. For the same reasons, SCE's forecast of the Direct Access Peak is not provided to the public. This is because SCE's total system is composed of both bundled service and direct access customers. Thus, if power producers knew the Direct Access Peak annual number, and SCE's Total System Peak, they could subtract the Direct Access Peak and arrive at the Bundled Customer Peak.

17. All Energy Supply and Management personnel are instructed that the Bundled Customer Peak, Direct Access Peak, net short and net long positions, whether they be computed hourly, monthly, quarterly or annually, are SCE trade

secrets and are not to be disclosed outside the company, except on a confidential basis to government agencies.

18. Exhibit C to the Writ Petition is a letter of the Acting Executive Director of the Commission dated June 3, 2005 and the Notice of Intent. The Notice of Intent contains three proposals.

19. "Proposal 1: IOU Bundled Customer," ("Proposal 1") if implemented by the Commission, would allow the Commission to release SCE's "Net Peak Demand for Bundled Customers" on an annual basis for 2009 and forward. This is the same market-sensitive information (other than the first three years) as released by the Decision which SCE is asking this Court to review. Proposal 1 would also allow the Commission to release SCE's Bundled Peak Demand on a quarterly basis.

20. Proposal 1 goes further than this Decision, however, in showing SCE's "existing and planned contractual resources." These are the resources SCE has or will have to serve its bundled service customers. A market participant who couples this data with the Bundled Peak Demand will know SCE's annual net short – the gap which SCE will need to fill. Indeed, Proposal 1 appears to provide SCE's generic resource needs, i.e., net short and net long, on both an annual and a quarterly basis. As noted above, there is already considerable public information available on SCE's supply. However, Proposal 1 appears to provide complete information on the net short to market participants for 2009 and beyond in a simple format and readily understandable format.

21. As Dr. Plott has stated: "To see how this could harm SCE's customers, it helps to look at a simple example. For example, if you're a quarterback, the best way to make sure the fans see your team score a bunch of exciting touchdowns is certainly not to invite opposing team members into your huddle. Just as you know you should withhold information from the other football team, you also know that you should hide your cards from your poker competitors,

and that you should avoid telling the used-car salesman how much money you can spend on a car."

22. Thus, the impact of the Decision to permit public disclosure of the Bundled Customer Peak and Direct Access Peak is exacerbated by the Notice of Intent. The Notice of Intent would release supply-side data – how resourced SCE is. The Decision, if not set aside, would release demand-side data – how much SCE's bundled service customers need. This information, combined with other publicly available information, provides a fairly comprehensive assessment of SCE's needs to buy and sell power in the competitive marketplace.

23. Since SCE's customers pay for power, it is they who will ultimately be harmed should market participants see it and use it to their advantage.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on June 9, 2005 at Rosemead, California.

KEVIN R. CINI